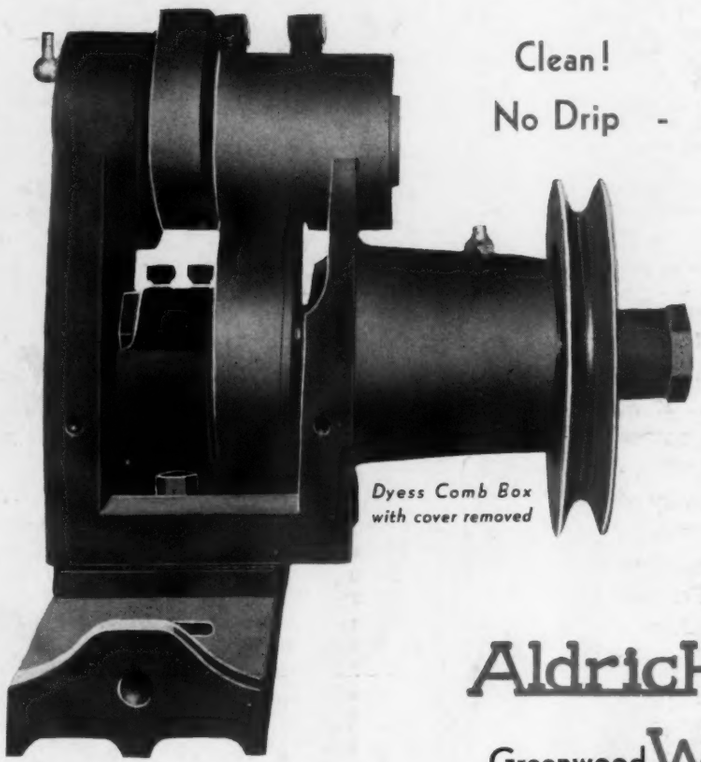
AUGUST, 1934

COTTON

Serving the
TEXTILE INDUSTRIES

The Dyess
Ball Bearing Comb Box

Every Bearing A Ball Bearing



Dyess Comb Box with cover removed

Clean! Quiet! Cool!
No Drip - No Spatter - No Rattle

This box is the ideal replacement for worn out plain comb boxes.

All boxes interchangeable—no right-hand or left-hand boxes.

A whole card room full of these boxes can be lubricated for a few cents a day.

Made by
AldricH MachinE
Greenwood, Work.S South Carolina

YARNS

WE DON'T TELL 'EM . . . . WE SELL 'EM

WE COLOR OUR YARNS WITH DYES . . . NOT LIES

TO color fish yarns with lies seems to be "author's license", but there is no such precedent for coloring cotton yarns. The only color we use in the sale of Franklin Process yarns comes from first class dyestuffs. Nothing is intentionally misrepresented from staple to identity of spinning. Furthermore we take every practical precaution to see that nothing is *unintentionally* misrepresented. ¶ Franklin Process yarn offerings include all popular counts and qualities — natural, bleached or dyed — in any standard put-up more commonly used.

If you are not sure what yarn is best for your purpose, let us give you the benefit of our contact with a great variety of cotton yarn users. Prices, samples and delivery on request.

FRANKLIN PROCESS COMPANY

Yarn Merchants and Yarn Dyers. Also Manufacturers of Glazed Yarns and Machines for Dyeing and Bleaching Yarns in the Package Form, Cotton and Wool Raw Stock, Worsted Tops and Worsted Yarn on Jackspools, also Machines for Soaking Silk. Main Office and Plant at Providence, R. I. Branch Plants at Philadelphia, Pa., Greenville, S. C., and Chattanooga, Tenn. New York Rep., 40 Worth Street

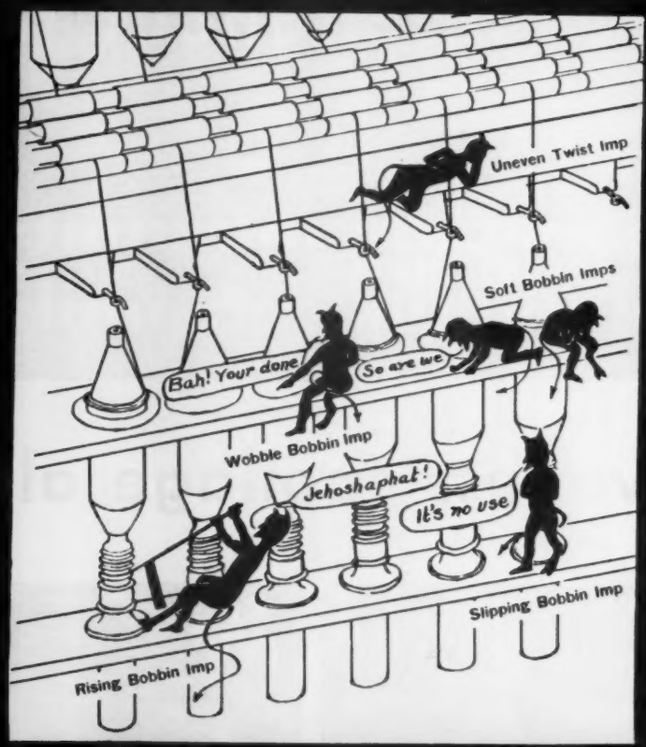
FRANKLIN PROCESS

COTTON YARNS AND CUSTOM YARN DYEING

COTTON is published monthly by W. R. C. Smith Publishing Co. Dalton and Atlanta, Ga. Subscription Rates, United States and Possessions, $1.00 for one year; $2.00 for three years; Canada, $1.50 per year; Foreign Countries, $2.00 per year. Entered as second-class matter at the postoffice, Dalton, Ga., under the Act of March 3, 1879.

Bobbins with A Bull Dog Grip on Spindles

That No Spinning Room Imp Can Break



The Number of Bobbins Rising from the Spindle Seat

Increases Rapidly with the Higher Spindle Speeds Demanded by Present Day Conditions—Depriving You of the Advantage of High Speed and Increasing the Amount of Slack Twist Yarn

Bobbins Will Not Slip at Any Speed

IF They have Stimpson Patent Bushings

and Are Used on

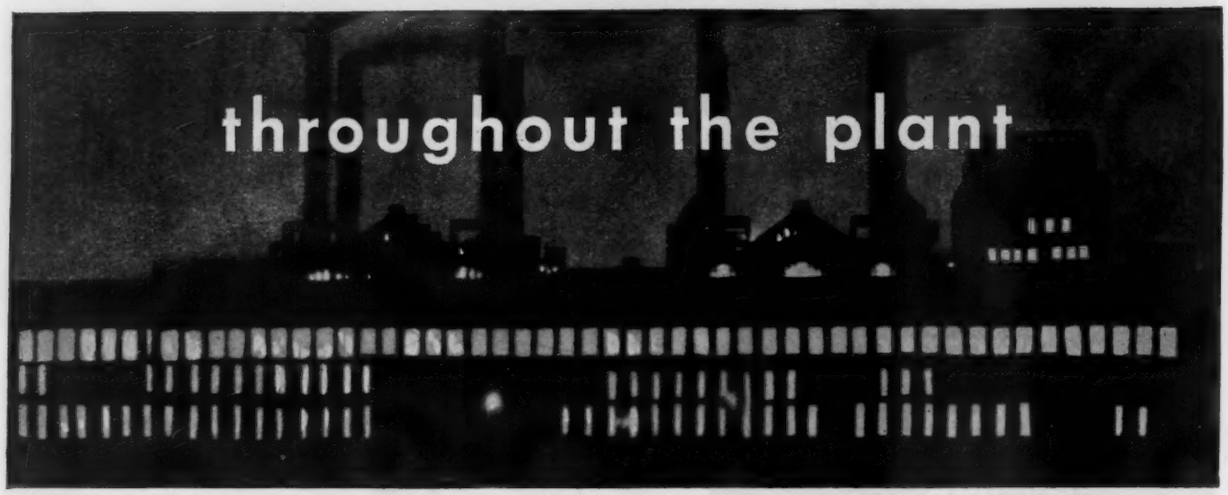
Stimpson Patent Clutch Spindles

DRAPER CORPORATION

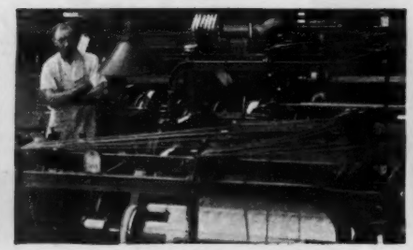
Hopedale Massachusetts

Southern Offices Atlanta Ga and Spartanburg S C

Tested lubricants



give less spoilage all along the line



TEXACO

Texaco *tested* Lubricants are vitally important to every textile mill because they will reduce spoilage and lower such operating expenses as power, maintenance, repairs.

Cards, combs, spindles, twisters, looms and many other types of equipment will throw oil or grease if the lubricants are not right. Texaco *tested* Lubricants will reduce spoilage because they are carefully applied to your own operating conditions. Constant research, plus work with the builders of textile machinery, gives Texaco a complete knowledge of lubricating requirements for textile machinery. This is why Texaco *tested* Lubricants, in your mill, will insure *economical* operation and *reduce spoilage.*

A talk with a Texaco engineer will show you how to avoid the machinery failures, lessen the spoilage hazards that result from ordinary oils and greases. Write to The Texas Company—no obligation.

FREE . . . The special "textile issue" of LUBRICATION is valuable to both executives and operators. No cost or obligation. Write to Dept. JJ 8, The Texas Company, 135 E. 42nd St., N.Y.C.

TEXACO
tested lubricants

The Texas Company, 135 E. 42d St., N.Y.C. ★ *There is a Texaco tested Lubricant for every purpose*

Cone Winding Cotton Knitting Yarn

CONE WINDING the last process in the Spinning Mill making yarn for Knitting, is the Mill's most important process.

The care and skill put into the production of a high grade yarn is rendered nil if the finishing process is not up to date.

The Foster Model 102 Cone Winder is a refinement of former Cone Winding processes, retaining all the time-approved features of the Foster Cone of former Models and adding more delicate manipulation of the yarn while winding, exact lay of coils on the cone surface to reduce variation in tension from the cone on Knitting Machine and additional slub-catching, making the 102 Foster Cone more than ever before the

"Standard Knitting Package"

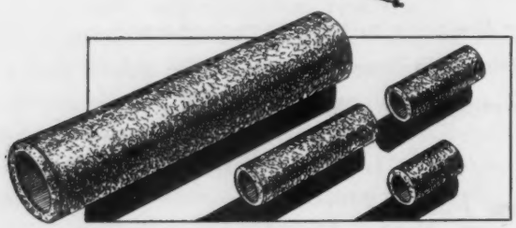
Foster Machine Company

WESTFIELD, MASSAKHUSETTS

FRED P. BROOKS, REPRESENTATIVE, P. O. BOX 941, ATLANTA, GA.

Re-inforced

CORK COTS



RE-INFORCED by the exclusive gummed cloth inner-lining that strengthens without affecting cushion and drafting qualities.

RE-INFORCED to enable the fastest and simplest known method of roll covering---wet the steel roll ---apply cot with the SONOCO Pull-on Machine---the gummed cloth inner lining freezes cot to roll in thirty seconds---*no glue.*

RE-INFORCED to insure uniform density of cork when on the roll and during its use.

NRA

SONOCO PRODUCTS COMPANY

HARTSVILLE, S. C.

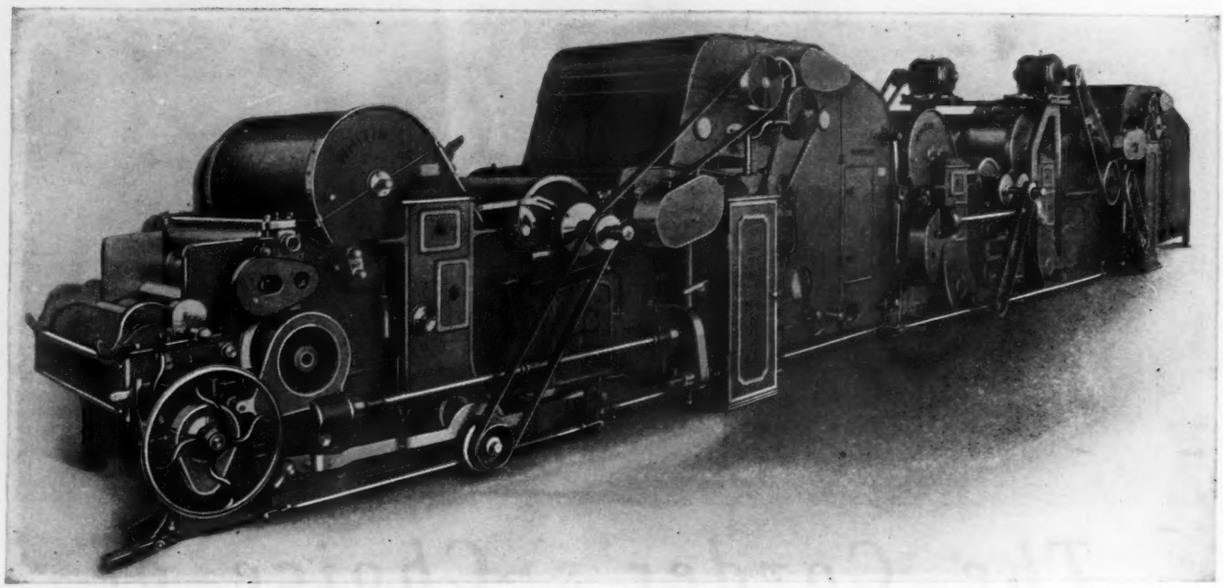
Branch Plants
Rockingham, N. C.
Garwood, N. J.
Brantford, Ont.

Main Plant and General Offices:
Hartsville, S. C.

Eastern Sales Office:
North Avenue
Garwood, N. J.

The WHITIN 1934 Picker Installation

. . . the result of more than one hundred years of progress in building Preparatory Machinery.



THE deep high Calender PERMITS OVERSIZE LAPS. Safety Rack Release and Safety Knock-Off Motions easily accessible from the outside.

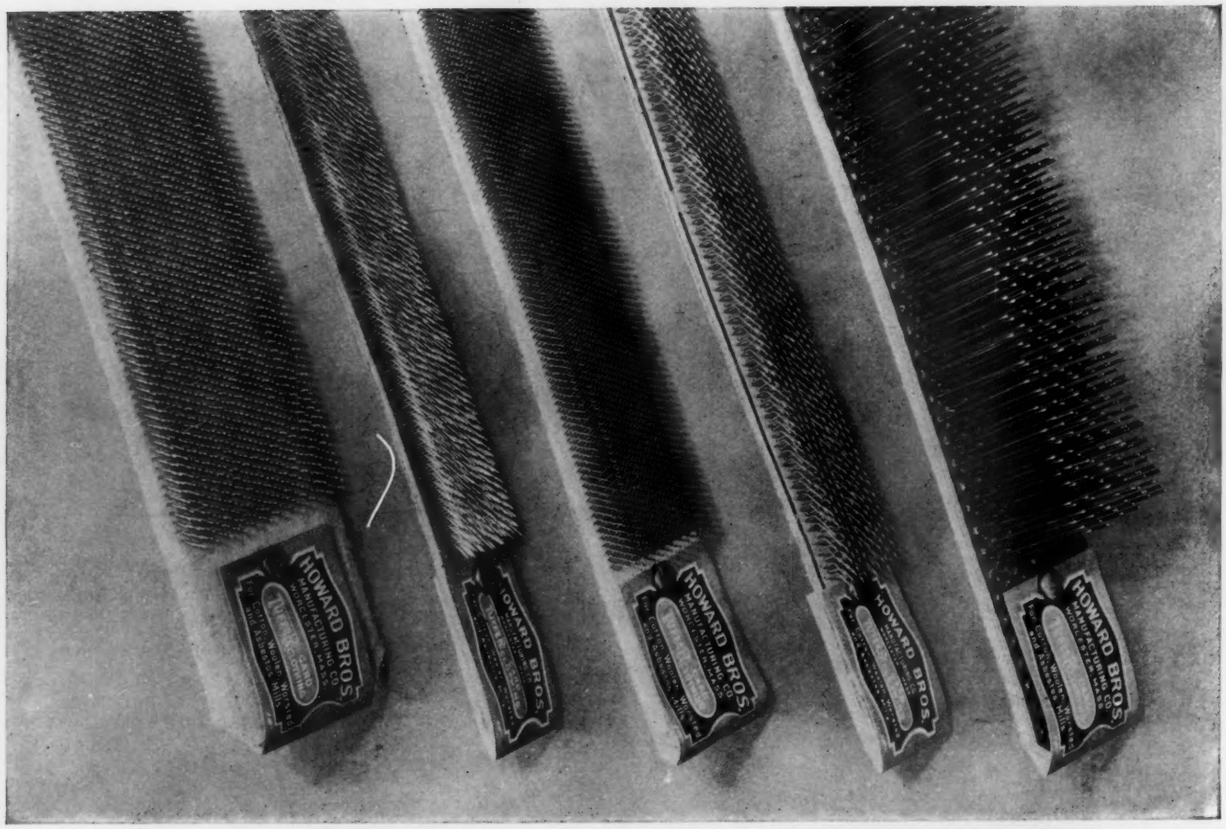
A sensitive Feed Regulator mounted in the Intermediate Hopper controls, AT ALL TIMES, WITHIN VERY CLOSE LIMITS, the amount of stock in the Feeder.

Stock is evened BEFORE it reaches the Feed Rolls, being acted upon by the Pedal Roll and Evener Pedals, thus providing GREATER EVENNESS AND SENSITIVITY.

Helical Gear Drive from Top Cone Shaft to Pin Apron insures AMPLE POWER and a QUIET POSITIVE DRIVE.

All parts readily accessible for rapid adjustment. Cleanout doors conveniently located, of ample size. Ball-bearings used generously throughout wherever practical and advantageous.

WHITIN MACHINE WORKS **WHITIN** WHITINSVILLE, MASS.



The Carder's Choice of CARD CLOTHING

To meet spinning and weaving specifications your carder wants the best tools he can secure. Card clothing can be his friend or his enemy, serviceable under all conditions, or a source of trouble. Howard Bros. have catered to your carder, by producing the famous Tuffer card clothing to best meet his requirements.

He wants a uniformly secure foundation. Tuffer foundation resists stretching, remains flexible and holds every individual wire in its proper place. We test and select all foundation fabrics, put them together ourselves under the most rigid standards. Even the glue is oil proof so that whatever you card can't transfer oil through the layers of the foundation and weaken it.

He wants wire of uniform temper and sharpness. Tuffer wire of the finest Swedish rods obtainable undergoes continuous tests before and after drawing.

Both your carder and ourselves appreciate the great importance of service. Howard Bros. representatives are trained and located at strategic textile centers to render immediate service on all carding problems.

Tuffer Products
Lickerin Fillets
Feed Roll Fillets
Tumbler Fillets
Stripper Fillets
Worker Fillets
Doffer Fillets
Fancy Fillets
Cylinder Fillets

TRADE MARK
TUFFER
REG. U.S. PAT. OFF.

Tuffer Products
Doffer Rings
Strickles
Emery Fillets
Burnisher Fillets
Top Flats Recovered and extra sets loaned.
Lickerins rewired at Southern Plant.

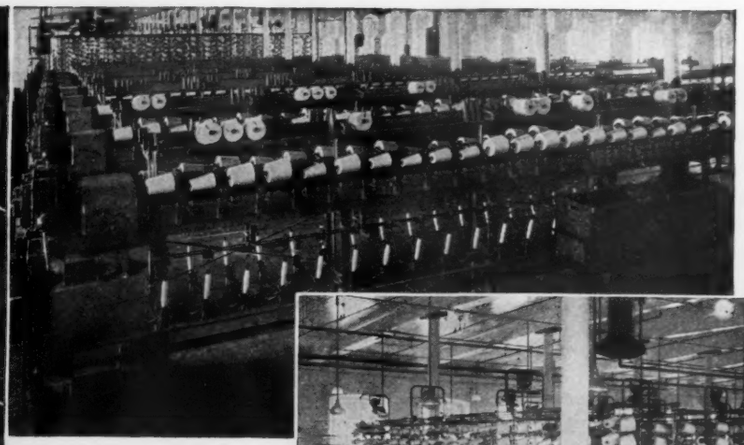
Midgley Patented Hand Stripping Cards and Inserted Eye and Regular Wire Heddles

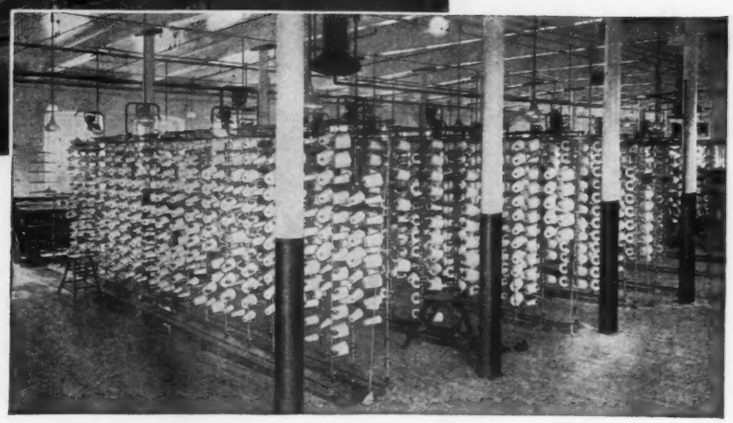
HOWARD BROS. MANUFACTURING CO.

HOME OFFICE AND FACTORY: WORCESTER, MASS.

Southern Plant
244 Forsyth Street,
Atlanta, Ga.

Branch Offices
Philadelphia, Pa., Dallas,
Texas, and Washington, D. C.





LEESONA
REG. U.S.A. AND OTHER PRINCIPAL COUNTRIES

SOMETHING TO REMEMBER

FULL SIZED CONES wound on the No. 40 Universal Winder are 8″ at the base and weigh 4 lbs.

Two cones are placed in a magazine creel, thus placing back of the warper 200,000 yards of No. 30's yarn. This quantity of yarn as a supply to the warper reduces the expense of creeling, as when a cone is exhausted another is tied in without stopping the operation of the warper. The imperfections have been removed from the yarn in the process of winding, and the yarn being delivered by absolutely uniform tension from the creel, insures as nearly perfect beams as can be obtained by any process.

UNIVERSAL WINDING COMPANY
BOSTON

322

UNIVERSAL WINDERS

FOR

- VISCOSE
- ACETATE
- SILK
- COTTON

● STRIPPER·T·S·

● STRIPPER T. S. is produced under conditions insuring absolute uniformity and complete stability.

● The stripping action is effective at a temperature well below the boiling point, thus preserving the tensile strength of the fibre.

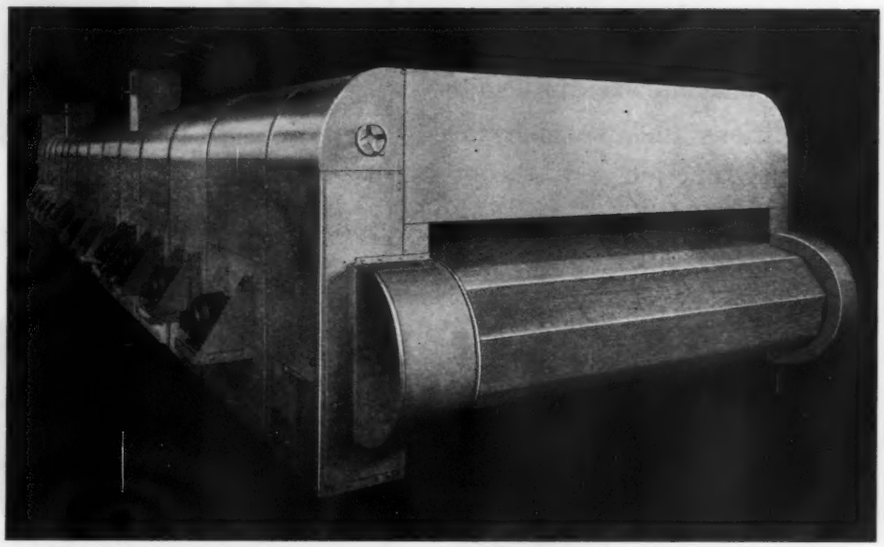
● STRIPPER T. S. requires no acid or other accelerator to assist in the stripping operation. The application of STRIPPER T. S. requires no special apparatus, and can be used in an open dye kettle, on a jig, or open washer.

● Further information concerning the use of STRIPPER T. S. will be furnished upon request.

STRIPPER·T·S·

ARKANSAS COMPANY, INC. • 233 BROADWAY • NEW YORK

Modern Drying Equipment



One Apron Stock Dryer

NEWEST DESIGN

A leader in its field. This Sargent Stock Dryer has proven its worth to many satisfied users. This general acceptance by owners can be attributed only to the superiority of design, materials and workmanship so characteristic of these machines.

FEATURES:

Centrifugal fans, direct motor connected, New type coils, Sectional Conveyor with speed control.

--NEW PATENTED CURVED TOP--

reduces air resistance—promotes free air flow.

SARGENT PRODUCTS

Acidifying Machine—Automatic Extractor—Automatic Feeders—Backwashers — Backwash Dryers — Bagging Machines—Ball Winder—Carbonizing Dryers — Cloth Dryers — Carbonizing Dusters—Cotton Stock Dryers — Crush Roll Machines — Press Roll Machines — Single Apron Dryer—Skein Dryer—Special Dryers — Wool Dryers—Wool Washers — Yarn Conditioners — Yarn Scouring Machines.

C. G. SARGENT'S SONS CORPORATION

Graniteville, Mass.—Founded 1852

Southern Agents:
Fred H. White, Charlotte, N. C.
Fred P. Brooks, Atlanta, Ga.

Philadelphia Agent:
F. E. Wasson,
205 Ledger Bldg.

SARGENT IS THE PIONEER AMERICAN BUILDER OF DRYERS

Unbiased recommendations

produce satisfactory control

ALL temperature control problems, including your own, are different. No two are alike. Not only are there differences in the objectives to be achieved, but also in the working conditions under which the control system must function and be coordinated with other mill equipment and activities.

It is for this reason that the instrumentation which Bristol's has developed for controlling textile processing is so diversified in design, type, method of operation and applicability. Regardless of whether your problem is to put an end to streaky goods, to matting and felting due to dyeing at incorrect temperatures, or to exercise closest regulation of cookers, size boxes and slasher cylinders, Bristol's has the facilities to offer several alternative solutions.

This permits the selection of the one best control,—the one which gives the maximum economy under *your particular* conditions. A Bristol's recommendation is unbiased. Its only purpose is to produce the practical results desired. For this Bristol's assumes undivided responsibility.

THE BRISTOL COMPANY, WATERBURY, CONN.

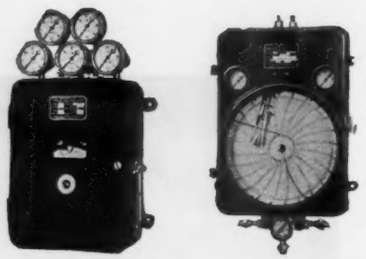
Branch Offices: Akron, Birmingham, Boston, Chicago, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, St. Louis, San Francisco

TRADE MARK

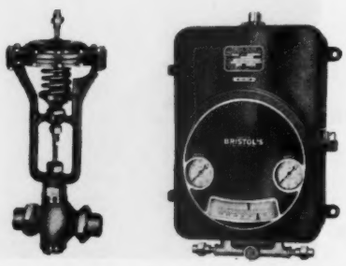
BRISTOL'S

REG. U. S. PAT. OFF.

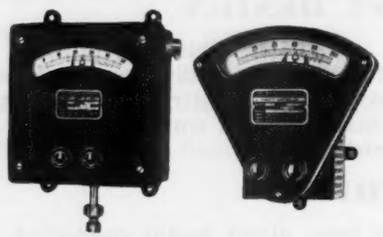
Pioneers in Process Control Since 1889



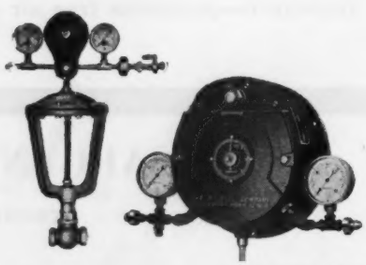
(Left) Process Cycle Controller, Model 6035. (Right) Full Floating Free Vane Air Operated Temperature Controller, Model 5340M.



(Left) Synchro Valve. Diaphragm Operated V port, balanced type. (Right) Full Floating Free Vane Air Operated Pressure Indicating Non-Recording Controller, Model 7040M.



(Left) Electric Pressure Indicating Controller, Model 87. (Right) Direct Reading Electrically Operated Humidity Controller, Model 4077B.



(Left) Valve Mounted Pressure Non-Indicating Controller, Series 425. (Right) Single Service Temperature Non-Indicating Controller, Connecting Tube Capsule Spring Type, Direct Acting Series 100.

Well!

I JUST SAVED THE FIRM $50.00

Here is a firm with thousands of dollars invested in equipment—carefully trained operatives—a fine reputation in the trade . . .

. . . yet this superintendent has risked it all to save a few cents a pound on his processing and finishing compounds.

"Cheap" textile oils and compounds are false economy. **Saving a few dollars on the invoice is small compared with the production economies—better fabrics—and higher prices obtained by using dependable, effective, uniform compounds.**

ONYX processing and finishing compounds are true products of textile chemistry. They are full-strength compounds developed to fit their particular needs . . . built to meet changing conditions of water—heat—acids—alkalies—plant conditions. Smaller quantities do a bigger job. There is less waste—faster, smoother production—reduced troubles.

Above all, ONYX guarantees laboratory-controlled uniformity — that priceless, invaluable requisite for efficient mill operation—found in few lines, never in "cheap" compounds.

We invite textile manufacturers to write for samples, stating operation and fabric. Prove for yourself, what many other mills have enjoyed for a long time.

ONYX OIL & CHEMICAL CO.
Specialists on Finishing Materials.
Jersey City, N. J.
Midw. Repr. Maher Color & Chem Co., Inc., Chicago.
In Canada: Onyx Oil & Chemical Co., Ltd., Montreal.

Onyx LABORATORY-CONTROLLED PROCESSING & FINISHING COMPOUNDS

This Treatment makes any case

"Bound to get there"

This is the Acme ceiling bracket with reel—which I have successfully prescribed many times. It keeps Acme Steelstrap up out of the way of the operator—but easily accessible. When strapping is done in one place—this ceiling reel is a smart idea.

Take, for example, this large case of textiles—weighing about 150 pounds—

With a treatment of Acme Steelstrap—two administrations of suitable size—we made it snug and strong.

But corrugated boxes are only one class of patient. With my Acme Steelstrap we do wonders for wood boxes—trimming down poundage without losing strength.

And as for bales—Acme Steelstrap is the stuff to tie 'em with.

I suggest that you write me about your packages. Tell all, and I'm sure I can offer practical assistance. I'll send you facts on my operations in your own line of business. I'll also send my STRAP-BOOK. Write today.

Doc. *Steelstrap*

Acme Steelstraps

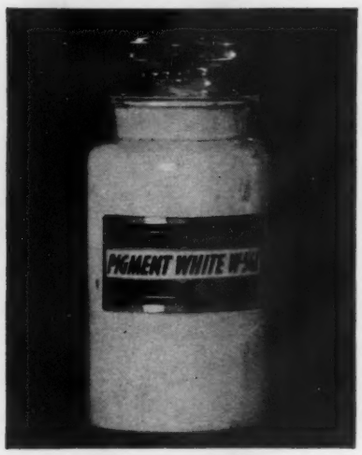
ACME STEEL COMPANY · GENERAL OFFICES: 2847 ARCHER AVE., CHICAGO

Branches and Sales Offices in Principal Cities

Chemical Specialties

ORATOL

A specially sulphonated, fatty derivative which is resistant to lime, magnesium salts, sulphuric acid and mineral acids. It is recommended for unusual penetration and scouring silk, cotton and wool. Only a small proportion used in the wash for printed silks brightens the colors and pigment white objects.

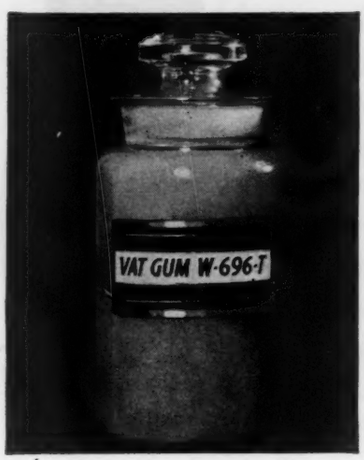


PIGMENT WHITE W-561

Our Pigment White W-561-A is especially adjusted for use with any natural gum thickener. Pigment White W-561-T is to be used in conjunction with a starch or starch-tragacanth thickener. The finely suspended pigments of these two products give a free flowing body to the printing paste.

BACKFILL BINDER K

This product has been used by a number of mills with unusual success. Being highly soluble it dissolves readily in cold water and is more economical to use. Its adhesive qualities prevent the sizing from dusting off, and its thickening power is much greater than starch.



VAT GUM W-696-T

This thickener for vat colors contains the required amounts of hydrosulphite and alkali. It gives greatest color values, full penetration, sharp outlines; and its smooth, syrupy body does not go ropy.

MONOPOLE OIL W-745 **SULPHONATED OLIVE OIL W-700**

Our Monopole Oil W-745 is a double sulphonated castor product and Sulphonated Olive Oil W-700 is an all olive oil product. These oils are highly sulphonated and contain the maximum quantity of combined SO_3. They are completely soluble and resistant to hard water and organic acids.

The facilities of our laboratories are always available to help you in the solution of your special problems.

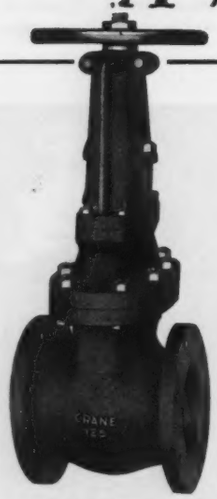
JACQUES WOLF & CO.

Manufacturing Chemists and Importers

Passaic, N. J.

Warehouses: **Providence, R. I. • Philadelphia, Pa. • Utica, N. Y. • Chicago, Ill. • Greenville, S. C. • Chattanooga, Tenn.**

A STITCH IN TIME!



Crane No. 465½ Standard Wedge Gate Valve with outside screw and yoke for steam working pressures up to 125 lbs.

Crane No. 373 Standard Swing Check Valve for steam working pressures up to 125 lbs.

IT ISN'T far-fetched to tell you that prevention is a "stitch in time" so far as your general piping and its maintenance are concerned . . . Crane Standard Iron Body Valves cut down power loss and save endless hours of repair and maintenance time. These valves are built with disc guides and body ribs fitted so accurately that discs must ride true to the seats when closing. High grade brass is used in seats and discs and finished with Crane accuracy. Stem materials are specially selected and developed by Crane to give extra strength . . . extra long life! Results: tighter seat, easier movement, longer life in every valve. Specify Crane Standard Iron Body Valves . . . for *added* service!

Crane No. 351 Standard Globe Valve for steam working pressures up to 125 lbs.

CRANE

CRANE CO., GENERAL OFFICES: 836 SOUTH MICHIGAN AVE., CHICAGO, ILL. • NEW YORK: 23 W. 44TH STREET

Branches and Sales Offices in One Hundred and Sixty Cities

VALVES, FITTINGS, FABRICATED PIPE, PUMPS, HEATING AND PLUMBING MATERIALS

GOOD? *Heck, it's perfect!*

THERE'S NOTHING BETTER THAN 100%—

...but Houghton's Warp Conditioner will do that good!

The development of Houghton's Warp Conditioners is directly the result of endless research by the Houghton Laboratories, working together with practical men in the field.

By their use you are able to control exactly your sizing operations to a degree never before thought possible. This control removes the last uncertainty in the manufacture of cotton goods.

Compare warps sized with Houghton's Sizing Products with those sized with other compounds, and the difference will explain to you, just as it has to hundreds of others in your industry, why these products find such wide favor.

For a smooth warp with less shedding, greater strength and better weavability, at greatly reduced cost, use Houghton's Warp Conditioners.

E. F. HOUGHTON & CO.

Chicago PHILADELPHIA Detroit

Southern District Office, Charlotte, N. C.

Send this coupon to 240 W. Somerset St., Philadelphia, Pa., to get the valuable booklet, "Houghton on Sizing Products"

☐ Please send me your informative book—*Houghton on Sizing Products.*

☐ Have your representative call to talk with me about warp conditioning.

Name.....

Company.....

Address.....

City and State.....

8-34

Longer Life IN DYEING *with* FAFNIR BALL BEARINGS

Riggs and Lombard Fafnir Ball Bearing equipped Universal Sample Dye Kettle.

Fafnir Ball Bearing Pillow Blocks are carrying the loads in this modern Universal Sample Dye Kettle built by Riggs and Lombard. It's the modern way of carrying loads to assure full efficiency from carefully and capably designed machines.

Any sample of medium weight fabric from three to eighty yards in length can be handled at reel speeds of from 4 to 40 R.P.M. Fafnir Ball Bearings provide the essential smooth and continuous trouble-free operation.

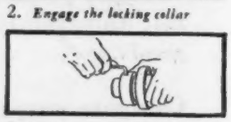
Ease of assembly as well as efficiency of service and minimized maintenance were responsible for the selection of Fafnir Pillow Blocks. The Fafnir Wide Inner Ring Ball Bearings rival plain bearings in simplicity of assembly and disassembly.

Modernize with Fafnir Ball Bearings. There's a type and size for every gear, wheel and axle in "the most complete line of Ball Bearings in America."

The Fafnir Wide Inner Ring Ball Bearing is outstanding in its simplicity of application.

1. *Slide the bearing on the shaft*

2. *Engage the locking collar*



3. *Set the screw, and the job is done*

KEEP *abreast of new developments. Read Fafnir's house organ, "The Dragon." We will gladly put you on the mailing list.*

THE FAFNIR BEARING CO., *New Britain, Conn.*

Representatives also at:

Atlanta, Ga. Charlotte, N. C. Dallas, Tex.
Houston, Tex. Boston, Mass. Birmingham, Ala.

FAFNIR BALL BEARINGS

Protect this

in the chain of your Production

Reduce your warp-end breakage with VELVEEN XX. This excellent sizing starch gives you a warp of unusual smoothness and strength. Shedding and warp-end breakage are both reduced to a minimum, resulting in real production economy. That is why so many mill men report that

Warps sized with VELVEEN XX
have greater Weavability

STEIN, HALL & COMPANY, INC.

EST. 1866

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This PROVED SPEED CONTROL

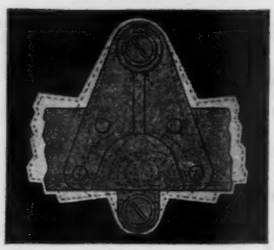
provides ANY SPEED — and maintains it WITHOUT FLUCTUATION

Enclosed Design REEVES *with "centralized" force-feed lubrication (with cover removed).*

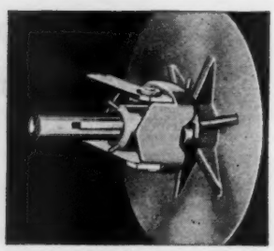
A variable speed control unit must do MORE than provide an infinite number of operating speeds for the machine it regulates. It must ACCURATELY MAINTAIN any speed setting as long as desired—*regardless* of how fast or slow the speed—and *regardless* of varying loads.

The REEVES Variable Speed Transmission *does* this. The REEVES *absolutely* holds any desired speed with hair-line accuracy, due to positive delivery of power by the *time-tested* REEVES V-belt whose tension is automatically controlled through the patented REEVES equalizing lever link.

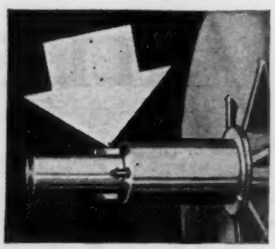
Many other fundamental and exclusive advantages in design, construction and performance explain the world-wide popularity of the REEVES Transmission. Over 80,000 applications in 16,000 industrial plants. Used as standard equipment by 900 different machine builders. Available in the *correct* size, speed ratio, control and design for every industrial requirement.



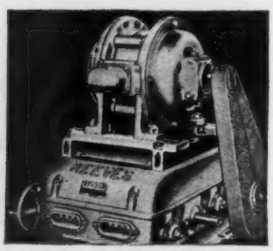
EQUALIZING LEVER LINK automatically maintains uniform belt tension at all speed settings—and *prevents* speed fluctuation under varying loads.



EQUALIZING COLLAR distributes load evenly on every ball in each thrust bearing—and holds bearing in perfect alignment at all speed settings.



SHAFT DRIVING KEYS—two large keys in each shaft, full length between frame bearings, permit free lateral movement of discs on shafts.



COMPACT MOTOR MOUNTING saves space and is universally adjustable. On capacity and safety factor basis, REEVES is most compact of any unit.

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Send, without obligation, information on modern variable speed control of production machines, as contained in your latest Catalog T-99.

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Company.....

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Put your fibers and fabrics in the hands of Gardinol and be safe. Send for sample to test, and more information today. It will pay you.

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GARDINOL CA
GARDINOL LS
(Pat. Applied for)

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Gardinol is the registered trade mark used by the Gardinol Corporation to designate its sulfated, higher alcohols

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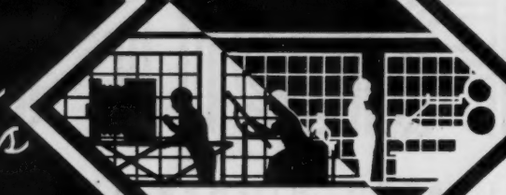

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Is particularly useful for dyeing cotton yarns and piece goods, holding its shade quite well on after-treatment with copper, chrome and acetic acid.

*Properly oxidized SULFOGENE Brown CL4R does not give the shade variations on ageing that are characteristic of most red sulphur browns.

By combining this du Pont Dyestuff with SULFOGENE Brown RBNCF and SULFOGENE Tan 2RCF you may obtain a wide range of desirable brown shades. Why not send for sample of SULFOGENE Brown CL4R? It may be just the dyestuff that will fit in with some of your current jobs.

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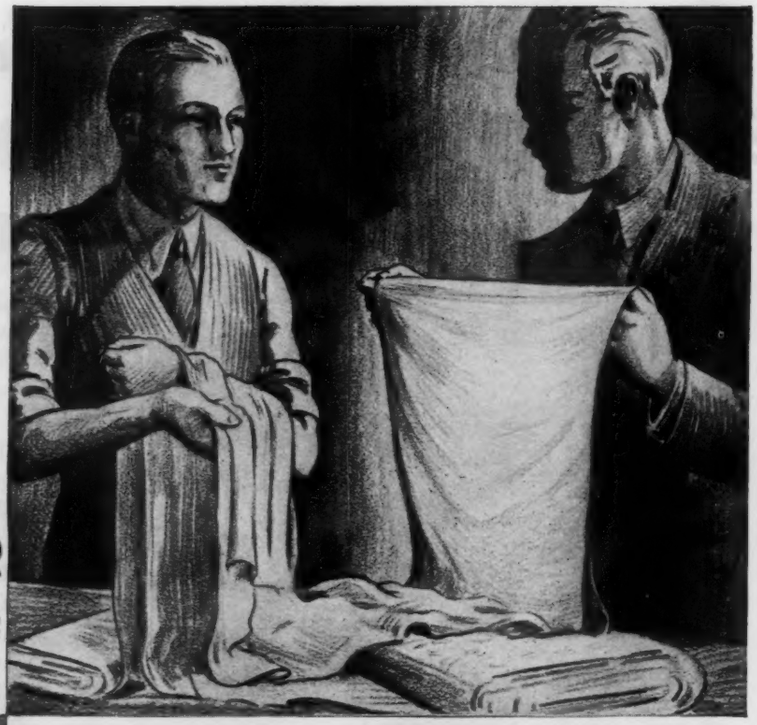

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GRASSELLI Formic Acid is always uniform in quality—always crystal clear—never darkening when exposed to light. Being both an acid and an aldehyde, it produces results not obtainable with other acids.

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Acetate of Lead	Carbonate of Soda	Muriatic Acid	Sulphite of Soda
Alums, U. S. P.	Caustic Soda	Nitric Acid	Sulphide of Soda
Aqua Ammonia	Chloride of Lime	Oxalic Acid	Sulphuric Acid
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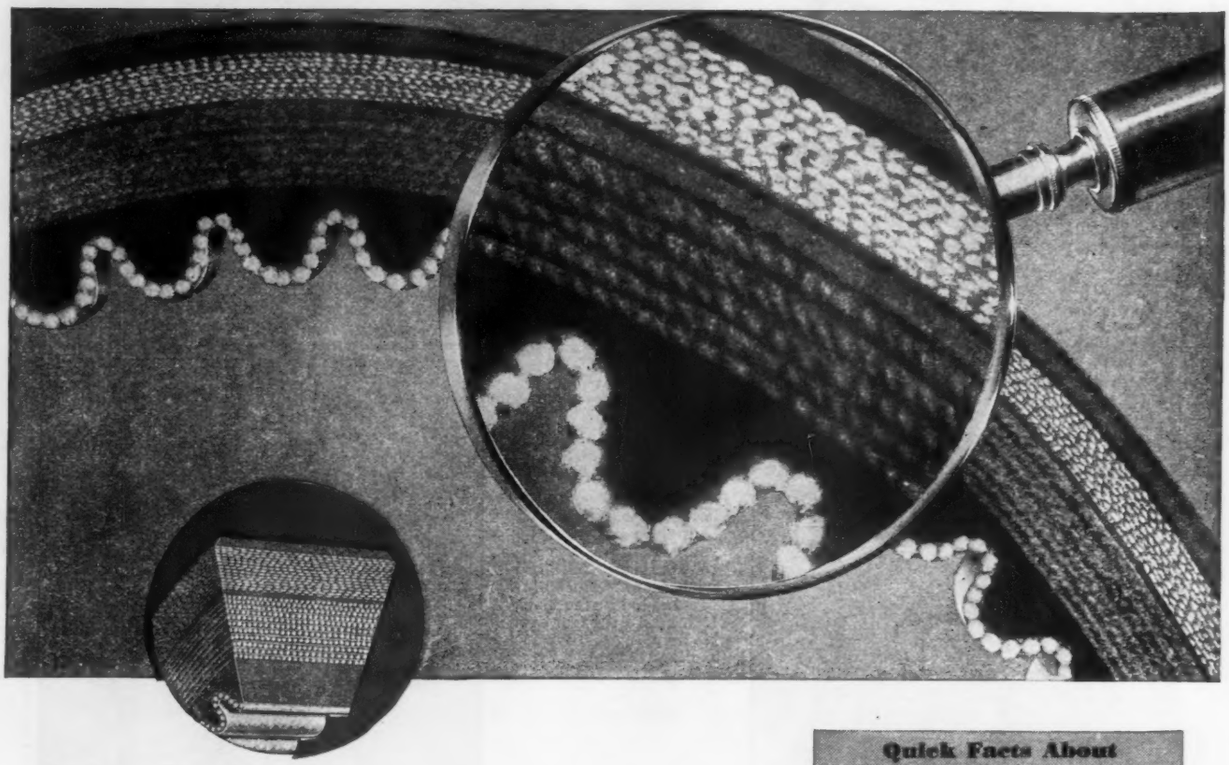
Greater Gripping Power *with less tension*



Sides *die-cut*—not molded—provide another exclusive and important reason for the proved efficiency of Dayton Cog-Belts

A powerful, leech-like grip—less slipping or sliding even with quick starts and stops—less loss of power—less vibration—

—these are some of the many advantages assured by the *die-cut sides* of Dayton Cog-Belts. The raw edges of the die-cut sides contact the sides of the pulley groove and form the driving surface. There's practically no wear. Nor will they ravel. Nor glaze.

Because of this exclusive construction no other V-Belt provides such unfailing gripping qualities—such a steady, uniform flow of power, regardless of speeds—all with less tension, less wear on the bearings.

And in addition to die-cut sides, Dayton Cog-Belts have many other outstanding features. They're the only belts *built to bend*. Because of their cogged inner surface and laminated construction they have far greater flexibility. Even on the smallest pulleys there's no buckling, no distortion, no "squashing" in the pulley groove—*the only V-Belt that combines maximum flexibility with crosswise rigidity.*

And economical, too—cost less to use. They're pre-stretched, so adjustments are seldom necessary. And their *life* is *twice as long* as ordinary belts.

These are only a few of the reasons for the pronounced trend to Dayton Cog-Belt Drives in the power transmission field. We shall be glad to send you all the facts.

THE DAYTON RUBBER MFG. CO.
DAYTON, OHIO

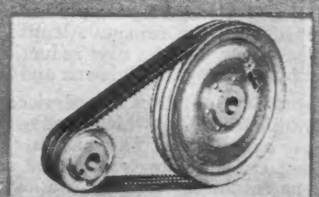
Factory Distributors in Principal Cities and all Westinghouse Electric and Manufacturing Company Sales Offices

Quick Facts About Dayton Cog-Belt Drives

1. Save floor space.
2. *Built-to-bend*—no distortion—no internal heating.
3. Greater gripping power—no slipping or sliding.
4. Stretch removed—fewer adjustments necessary.
5. No dressing or lubrication.
6. Less tension required—easy on bearings.
7. Longer life—belt replacement costs often cut in half.
8. Quiet—Clean—Rugged.

Complete drives—pulleys and belts—in stock. Fractional to 100 H. P.

DAY-STEEL PULLEYS



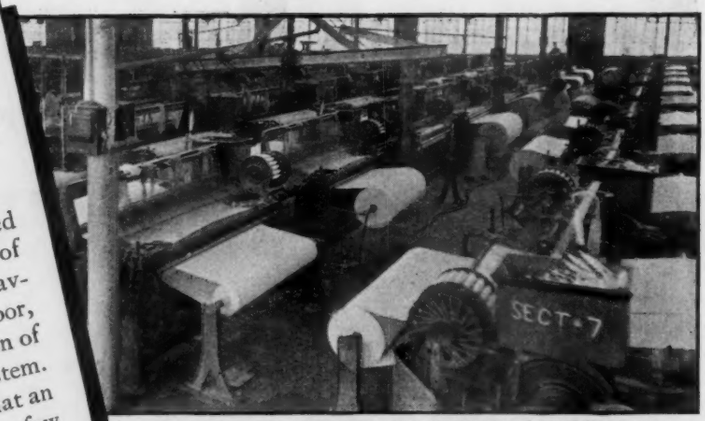
Investigate the exceptionally low cost of Dayton Cog-Belts with Day-Steel Pulleys

Dayton
COG-BELT DRIVES

Also manufacturers of Dayton Fan Belts . . . Dayton Red Tube Radiator Hose . . . and the famous Dayton Thorobred Tires and Tubes

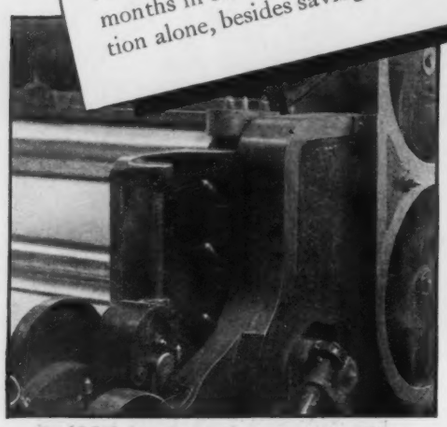
WHAT EVEN FORMER ALEMITE LUBRICATION SYSTEMS HAVE DONE FOR INDUSTRY

The savings in this Alemite equipped textile mill are typical. Thousands of industrial plants have made important savings in power, maintenance, safety, labor, and lubricants since the introduction of the original Alemite Lubrication System. Plant superintendents have found that an Alemite installation pays for itself in a few months in savings on lubricant consumption alone, besides saving time and labor.



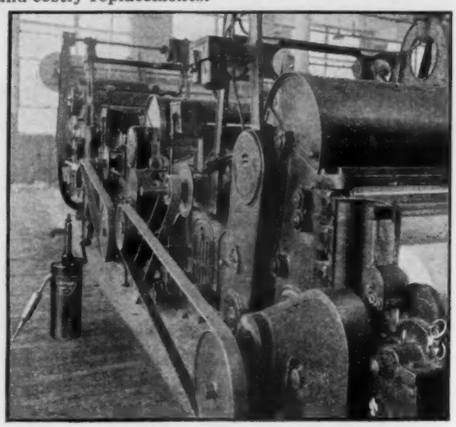
LUBRICATED ONCE A WEEK INSTEAD OF EVERY DAY!

Plain bearings on equipment in this room had to be serviced every morning with oil hole lubrication. Same bearings were lubricated only once a week with Alemite. *No interruptions for lubrication! No bearing failures* to cause loss of production time and costly replacements.



TWO YEARS WITHOUT AN OIL CAN!

There hasn't been an oil hole or grease cup on this equipment for two years. Alemite "Barrel-to-Bearing" method with Alemite No. 33 lubricant has saved time, labor and lubricants. No dripping oil to cause spoilage of materials.



...And Now the New ALEMITE HYDRAULIC LUBRICATION SYSTEM *Makes Possible Amazing New Savings!*

10,000 LBS-PER-SQUARE-INCH PRESSURE CLEANS AS IT LUBRICATES. SAFER TO USE. NO LEAKAGE AT FITTINGS.

THE new Alemite Hydraulic Lubrication System—combined with the famous Alemite "Barrel-to-Bearing" method—now permits new reductions in your production costs by reducing breakdowns and repairs.

Its new-type fittings are serviced with the new Alemite Hydraulic Hand Gun which develops pressures up to 10,000 lbs. per square inch! This pressure, far greater than ever before possible to develop by hand, actually cleans out bearings as it lubricates. All worn, dirty grease is *forced out*—as fresh, new lubricant is forced in and around *all* bearing surfaces. No "dry spots" or frozen bearings can resist such pressures.

The gun takes hold of the new Alemite Hydraulic Fittings instantly and grips them tightly—the higher the pressure, the tighter the seal. There's no leakage; no chance for the gun to slip off the fitting.

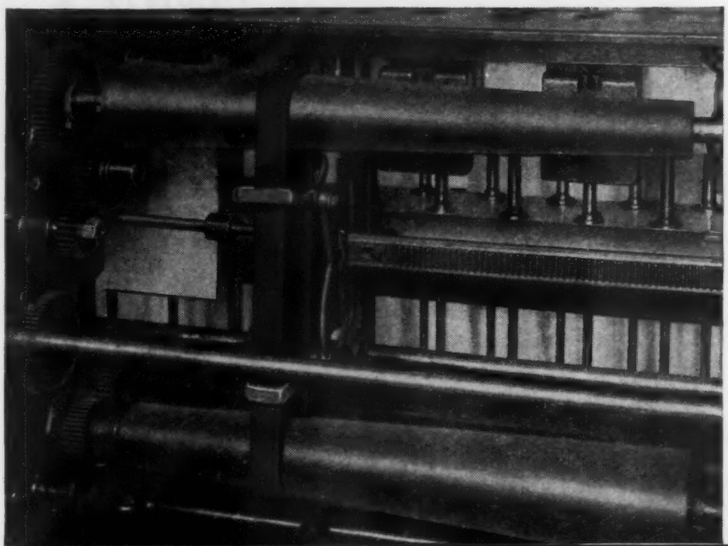
Alemite Hydraulic Fittings can be quickly installed on equipment now lubricated by oil holes, grease cups, or previous Alemite Systems. Savings begin at once!

Your Regular Jobber Can Furnish Alemite Hydraulic Lubrication Parts

We have extended our jobber policy to give you better and more rapid service. For closer contact with an immediate source of supply, call your regular jobber for purchase of such equipment. As always, you are invited to consult us freely regarding lubrication problems. Our engineering department is now working with a number of manufacturers on plans to change over plant equipment to the new Alemite Hydraulic Lubrication System. A note will put us in touch with you—without obligation.

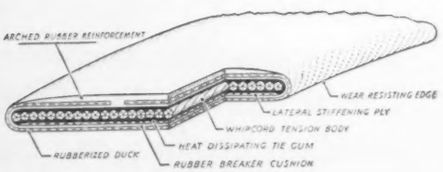
ALEMITE CORPORATION
Division of Stewart-Warner Corp'n.
1884 DIVERSEY PARKWAY CHICAGO, ILLINOIS

CONDOR WHIPCORD CONE BELT



CONDOR CONE BELT ON A TYPICAL CONE DRIVE OF A ROVING FRAME

SECTIONAL DRAWING OF CONDOR CONE BELT



DESIGNED FOR LONG LIFE

Condor LINE

V-Belt	Fire Hose
Flat Belt	Steam Hose
Air Hose	Molded Goods
Cone Belt	Suction Hose
Acid Hose	Oilless Bearings
Water Hose	Rubber Lined Tanks

Rubber Covered Rolls
Industrial Brake Blocks and Lining

The unique whipcord construction used in Condor Whipcord Cone Belts is especially adaptable to cone and evener drives.

Accurate records of hundreds of belts have surpassed the highest expectations of our engineers.

The Condor Whipcord Cone Belt has a carefully balanced single layer, endless wound whipcord load carrying section held between two layers of tenacious tie-gum. The cords are specially pretreated to remove all inelastic stretch. Separation of component parts or chaffing between the cords is overcome.

Condor Whipcord Cone Belts are standardized into twenty-five specific sizes, thus accommodating all machines more conveniently.

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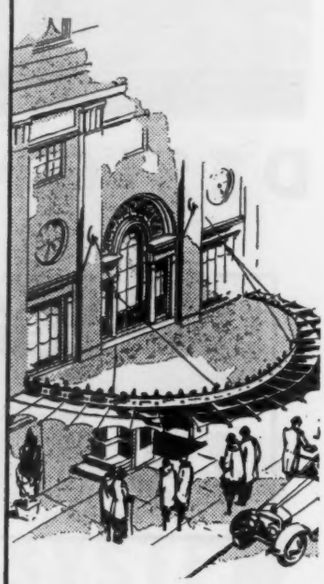

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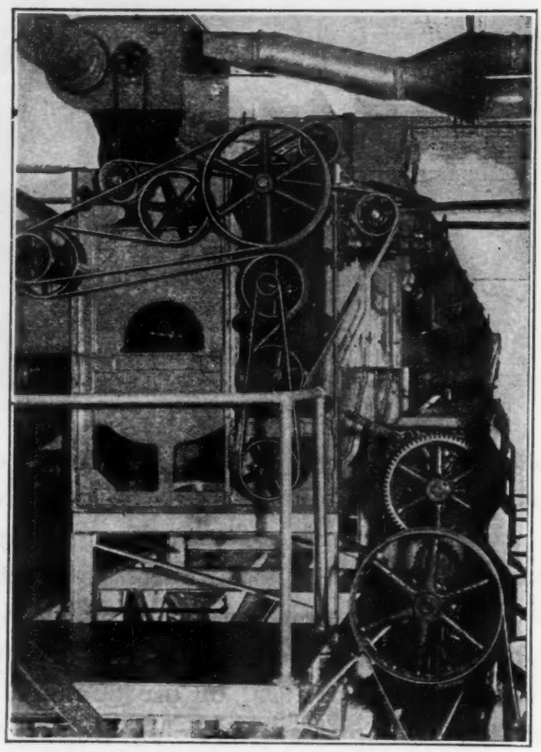
ECONOMICAL TRANSMISSION
WITH *Challenger*
SQUARE EDGE BELT



FOR MANY YEARS Challenger Square Edge Belt has proven its remarkable efficiency and economy not only in cotton mill operations but in power transmission throughout all industries where high speeds or heavy duty service prevail.

Challenger is noted for its high tensile strength, high flexibility, high coefficient of friction and lasting ply adhesion. It is adaptable to small pulleys and has the internal endurance to resist the destructive forces of continued flexing. It hugs the pulleys at low tension, maintaining high, uniform speeds. It is smooth in operation, holds vibration to the minimum and is built for heavy overloads.

While exceedingly low in permanent stretch, Challenger has pronounced resilience which promotes efficient transmission without excessive strains on shafts and bearings which increase friction and create power losses. This famous belt is furnished in roll or cut lengths or made endless when specified.

As a result of exhaustive researches, Republic Engineers are prepared to give you technical assistance on any transmission belt application. Place your problems before us.

◆

THE REPUBLIC RUBBER CO. YOUNGSTOWN, OHIO

MECHANICAL RUBBER PRODUCTS FOR EVERY INDUSTRIAL REQUIREMENT

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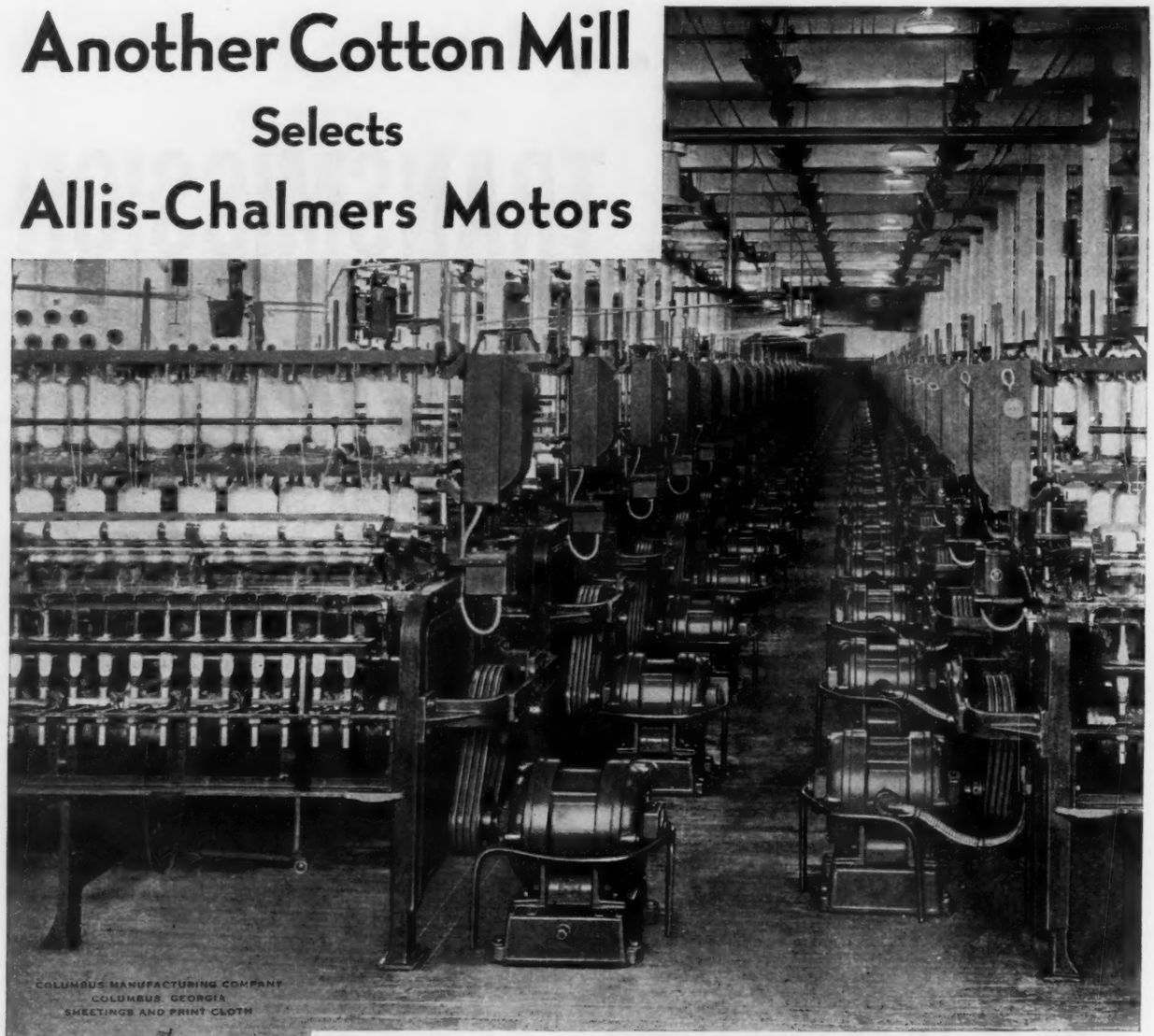
Another Cotton Mill Selects Allis-Chalmers Motors



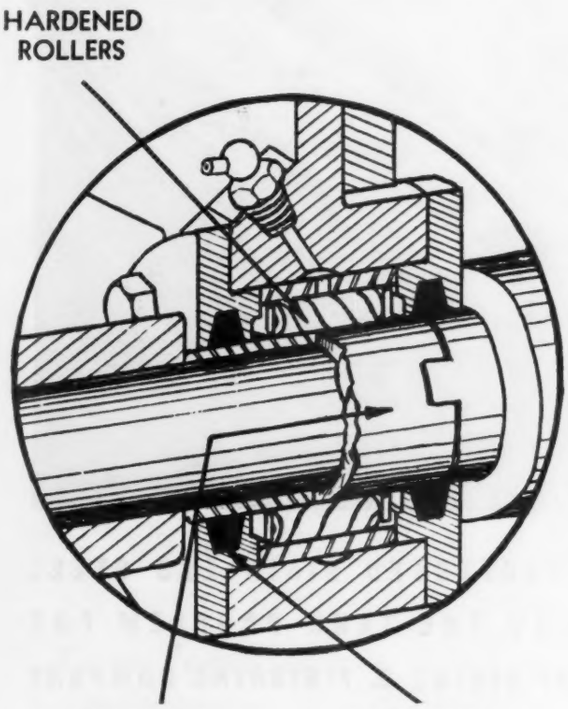
99 ALLIS-CHALMERS SEAL-CLAD TEXTILE MOTORS are driving spinning frames in the Columbus Manufacturing Company's Plant at Columbus, Georgia. Seal-Clad Motors have outstanding advantages for textile drives ... they were especially developed for such service. They have hard, smooth, bakelite shields covering the coils, and are without sharp edges, corners, or air pockets, in housings, stators, and rotors. Lint cannot clog this motor ... it blows through.

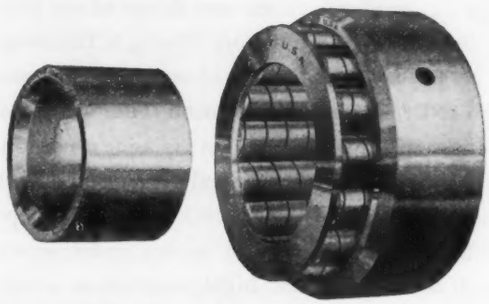
For details write or call the nearest Allis-Chalmers Textile Office, or write the Allis-Chalmers Mfg. Co., Milwaukee, Wis.

ALLIS-CHALMERS

TEXTILE MOTORS

COMMON SENSE PRACTICE IN LOOM BEARINGS





Hyatt Roller Bearings run in hardened races. The fact that they roll instead of rub means that wear is neglible even after years of service.

Take the Rockershaft Bearing for Example —

Mill men know that plain cast-iron bearings wear and wear the rockershaft and give plenty of trouble. They ask why a modern bearing can't be made to overcome these difficulties.

But they need seek a solution no longer because Hyatt Roller Bearings are now ending rockershaft bearing worries.

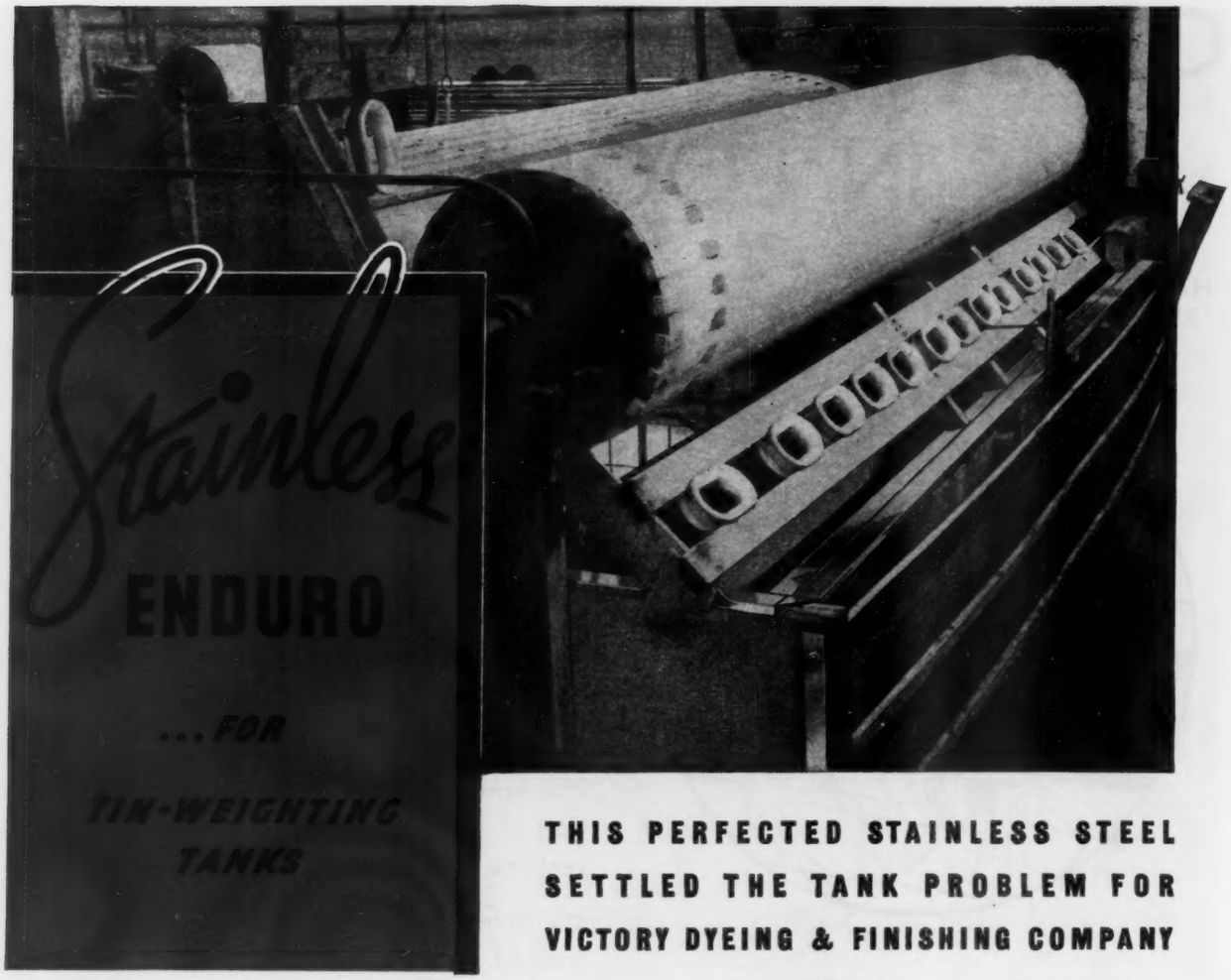
Hardened sleeves, as shown in the illustration of a Hyatt-equipped rockershaft, protect the bearing and shaft from wear.

Hardened rollers in hardened steel races roll instead of rub, eliminating friction and wear.

Generous size felts installed in close fitting end-plates keep what little lubricant is needed in the bearing and off the floor.

Thus in a practical way Hyatt Roller Bearings overcome rockershaft as well as crankshaft and other bearing troubles. Thousands of Hyatt installations prove it. And the price of two rockershaft bearings per loom is surprisingly low. Why not investigate. Hyatt Roller Bearing Company, P. O. Box 476, Newark, N. J.

HYATT
ROLLER BEARINGS
PRODUCT OF GENERAL MOTORS



THIS PERFECTED STAINLESS STEEL SETTLED THE TANK PROBLEM FOR VICTORY DYEING & FINISHING COMPANY

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Corrosion . . . leakage . . . spoilage . . . are now things of the past in the tin-weighting department of the Victory Dyeing & Finishing Company, Paterson, N. J. Like other far-sighted operators, they are using tanks lined with ENDURO, the stainless metal. Thus waste has been banished. No longer will it be necessary to lay aside a portion of the profits to pay for this equipment over and over again. • And other aggressive plants are turning to ENDURO for many equipment needs. For ENDURO gives unequalled service under severe dyehouse conditions. It is rust-proof and highly resistant to attack from chemicals and dyestuffs. It lasts longer, saves time, and safeguards product quality. And it has the strength of steel . . . more than sufficient for every equipment need. • No matter what your problem, it will pay you to get full particulars on the characteristics and advantages of ENDURO. It may offer a solution to some of your most troublesome and expensive equipment problems. Write us now for complete data.

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REPUBLIC'S PERFECTED
STAINLESS STEEL
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REPUBLIC STEEL CORPORATION
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Vol. 98

COTTON

No. 8

August, 1934

W. R. C. SMITH, Publisher
T. W. McALLISTER, Editorial Director

ROBERT W. PHILIP, Editor

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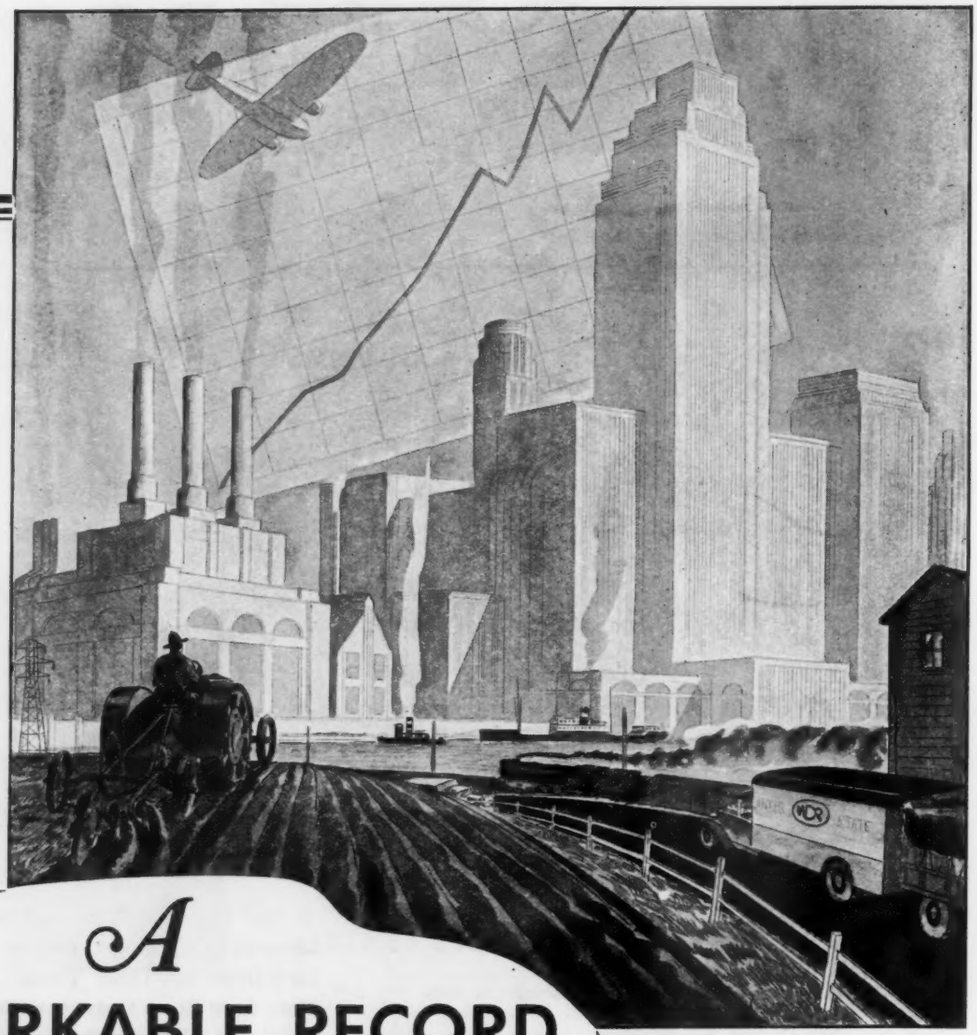


A REMARKABLE RECORD
. . . a Brilliant Future

● The use of rayon increased more than 500% in the past decade—from 33,000,000 pounds in 1923 to 207,000,000 in 1933. A record of progress unique in the annals of American business. A tribute to the beauty, utility and economy of rayon merchandise! ◆ ◆ Remarkable as this record of the synthetic yarn industry seems today, it is but a forecast of rayon's brilliant future. ◆ ◆ Industrial Rayon Corporation is proud to be playing an increasingly important part in the great synthetic yarn industry by producing worthy yarns and knitted fabrics — SPUN-LO, PREMIER, DUL-TONE — and by merchandising them in a sound manner.

INDUSTRIAL RAYON CORPORATION
9801 Walford Avenue Cleveland, Ohio

SPUN-LO • PREMIER • DUL-TONE

Vol. 98
No. 8

COTTON

August,
1934

Vocational Textile Classes at the Bibb Columbus Plant

By Russell B. Newton,
Superintendent, Columbus (Ga.) Plant
Bibb Manufacturing Company

THE Bibb, with mills in four Georgia towns, has consistently encouraged and operated vocational textile classes for training men to run better jobs more efficiently. Here is the story of these classes as operated at the company's large Columbus plant; of the methods used, of the record made, and of the results . . . . . .

◆ ◆

SOME years ago a prominent business man stated that the five great "M's" in business are materials, machinery, markets, money, and man, and the most important of these "M's" is Man.

Rapid progress has been made in the textile industry during the past few years, especially in the development of improved machinery. Recent estimates indicate that there is an immediate potential demand for one hundred million dollars worth of capital goods equipment for modernization purposes in the cotton textile branch of the industry alone.

We hear much about one-process pickers; long draft drawing, roving and spinning; high speed spooling and warping; and high speed looms; but how little do we hear about training men for efficiently operating the modern cotton mill!

Are we not giving too little attention to the most important part of any modernization program: the careful selection and training of men?

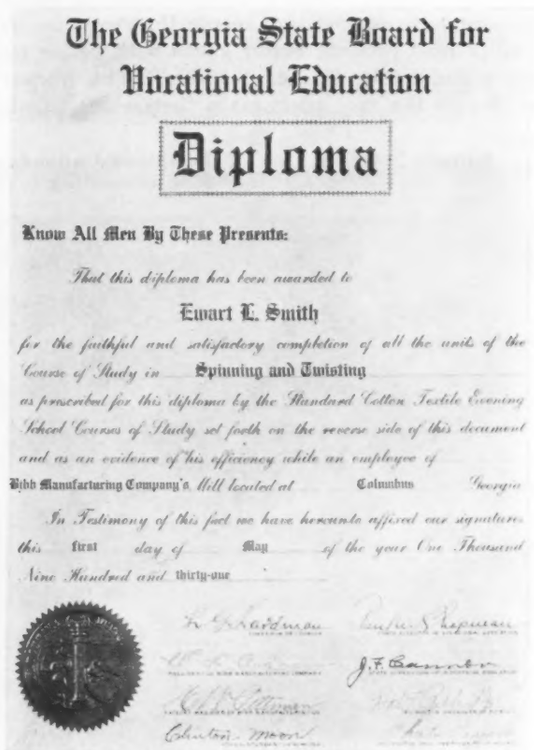
It has been a long established policy of our company and many others to select and train a number of promising young people each year for jobs of greater responsibility. The following figures show the school growth at the Columbus (Ga.) plant of the Bibb Manufacturing Company since 1928:

Year	No. Classes	Hrs. in Session	Total Pupil Hours	Average Attendance Per Class	Average Attendance	Total Enrollment
1928-29	2	208	1,696	8.1	16.2	35
1929-30	2	254	2,074	8.1	16.2	51
1930-31	2	218	1,948	8.9	17.8	46
1931-32	5	440	4,908	11.1	55.5	81
1932-33	7	405	11,022	15.9	111.3	208
1933-34	9	854	16,788	20.8	187.2	423

After the first year this work passed the experimental stage and has been growing rapidly in size and importance since that time.

The present Columbus organization of the Bibb consists of approximately 40 college trained men; 200 high school trained workers; and 2,200 others with varying degrees of elementary school training.

It has been the writer's pleasure actively to promote the vocational school work in our Columbus plant, and, for that reason the information contained in this article applies almost entirely to that organization. However, the same type of educational activity is being conducted in the other mills of the company which are located at Macon, Porterdale and Reynolds.



The Georgia State Board for Vocational Education

Diploma

Know All Men By These Presents:

That this diploma has been awarded to

Ewart L. Smith

for the faithful and satisfactory completion of all the units of the Course of Study in Spinning and Twisting as prescribed for this diploma by the Standard Cotton Textile Evening School Courses of Study set forth on the reverse side of this document and as an evidence of his efficiency while an employee of Bibb Manufacturing Company's Mill located at Columbus Georgia

In Testimony of this fact we have hereunto affixed our signatures this first day of May of the year One Thousand Nine Hundred and thirty-one

A Typical Vocational Class Diploma

Mr. Smith, to whom the diploma shown was presented in 1931, is now an instructor . . . . . .

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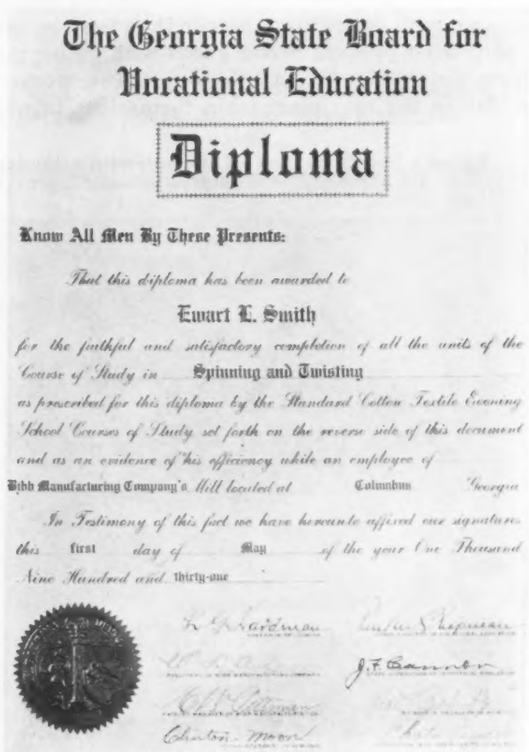

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With the advent of the NRA the need for better training has been increased, but fortunately more leisure time is available to the worker for securing this training than ever before. The Cotton-Textile Code Authority issued on February 28th the following "Interpretation Regarding Students":

"Students in the mills of the Cotton Textile Industry are defined to include persons who are seeking to increase their occupational opportunities.

"In case such Students perform a regular job under the regulations of the Cotton Textile Code, it is permissible for them to pursue their studies on their own time and without pay by remaining in the mill, to attend classes of instruction, or to observe and experiment with the operation of machinery, provided they are not paid by the mill or by the employee they are assisting, and provided further that the work of any employee they are assisting is not extended by reason of the assistance they give and that no other worker is displaced by their presence and activity, and provided further that the earnings of other workers in the mill are not in any way reduced or curtailed by their presence and activity."

This gives the ambitious worker a broader opportunity for the use of his leisure time in self-improvement and, with the proper guidance and encouragement, he soon becomes a better trained worker, who is ready to advance to a job paying a higher wage; or, through increased knowledge, he is made to feel more secure in his present job. Before the NRA most mills operated regularly only one shift and the chance for a worker to return to the mill and learn a better job was rarely if ever afforded. With additional time for both practical and theoretical instruction and study, the vocational school offers an exceptional opportunity of value to both management and workers.

The law of the "survival of the fittest" is still at work, and, with competition keener than ever before, the mills must produce better goods with better machinery and better trained workers. The workers who stay in the race must train themselves to win. The New Deal demands new and better methods.

During the term just ended classes were conducted in our Columbus plant as follows:

	Classes	Enrollments
Cotton Mill Mathematics and Practical Fixing	5	186
Cloth Calculations	1	34
Fancy Weaving and Designing	1	46
Practical Loom Fixing	2	157
TOTAL	9	423

The instructors are overseers, assistant overseers, or technically and practically trained men. The practical loom fixing is taught by expert loom men who are assistant overseers in the weaving department.

"The company will help those who help themselves" is the foundation stone of attendance incentives. The members of the mill supervisory staff must co-operate closely with the instructors in the schools to see that the best workers who are also diligent in their school work are given promotions when available. Many of the older skilled workers attend the classes in order to learn more about their jobs and for the purpose of assisting some of the younger learners.

Emerson once said, "Nothing great was ever accomplished without enthusiasm". Frequent inspirational talks by mill officials and instructors, backed by a keen personal interest in advancing those who merit it, maintain a growing interest in the work. The vocational school is an important and valuable part of the organization and is not treated as a side line.

Most of the pupils are eager to grasp the opportunity offered by these classes and many of them attribute their success to the encouragement given in inspirational talks made by the teacher or some speaker who has fired the ambition of the class.

Frequent circular letters from the superintendent

Editor's Note: In view of the splendid attendance records made by the class shown below, and the other Bibb classes, it would be interesting to hear from any other mill with similar good records.

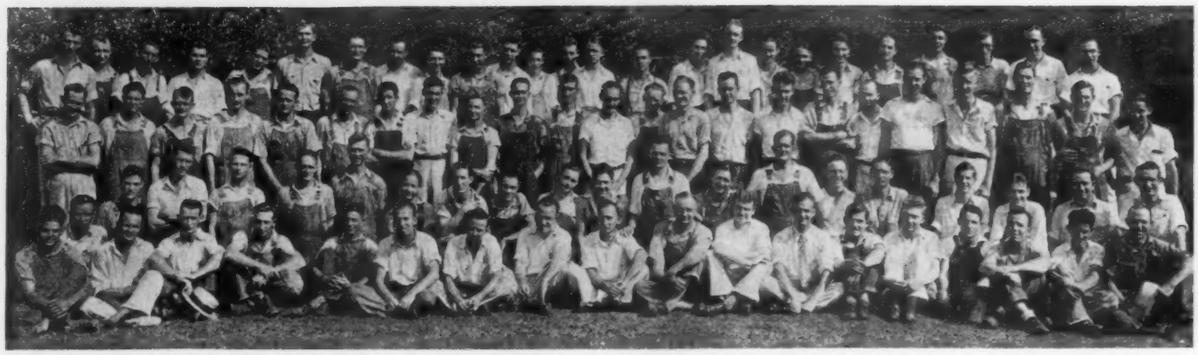
This is the loom fixing class of No. 2 shift, Columbus plant of Bibb Manufacturing Co., J. H. Pitts, instructor. This class made a record for the highest attendance of any vocational class in the South in the 1933 term. From left to right:

Front row: C. M. Kinsley, Ernie Bennefield, C. W. Williams, T. J. Adams, Russell B. Newton, W. E. Grant, Merritt Entrekin, C. R. Thompson, J. H. Pitts (instructor), W. E. Bryan, C. E. Dorn, Rufus Vance, Claude McKay, Marvin Halstead, Curt Spivey, Horace Adams, Jesse McKoy

Second Row: Clyde Mayo, W. N. Touchstone, Oxroe Eddings, S. S. Hunter, Seab Miller, C. W. Williams, W. S. Barefield, Audie Watford, G. A. Butler, Willie Cooper, Henry Jones, H. E. Thigpin, Lucius Boddy, Willie Burlinson, R. R. Bassett, W. P. Brooks, Arlie Hicks, Pat McCarty.

Third Row: Joe McAfee, Roy Speights, W. W. Neeley, Willie Cocker, J. R. Whitley, W. B. Nabors, Jimmy Mears, U. D Roberts, Phillip Jones, Edgar Renfroe, Edmond Rowell, Vivian Dean, Connie Dean, Gray Geiger, Lenard Denny, F. C. Adams W. B. Brooks, H. C. Harrison, R. B. Young.

Back Row: R. E. Pippins, Lyle Harrell, J. W. Schrimshire, E. H. Cobb, Sherman Bennefield, E. L. Pemberton, Ed Olive, R T. Stewart, Jim Entrekin, Q. R. Burlinson, C. A. Ramer, W. N. Bettis, J. E. Henry, Clifton Hurston, Earl King, D. A. Bedgood, C. M. Tinsley, Guy Davidson, Otis Skinner, Solon Pitts, J. B. Cook.



This is the loom fixing class of No. 1 shift. Columbus plant of Bibb Manufacturing Co., J. L. Montgomery, instructor. From left to right:

Front row: Gordon Odom, Gehue Holland, C. W. Atkinson, R. V. McCormick, J. L. Ward, H. C. Estes, John Baggett, C. R. Thompson, J. L. Montgomery (instructor), E. S. Coleman, C. E. Dorn, Russell B. Newton, Horace Shelnut, G. B. Ward, Jack Grice, W. L. Arwood, Arthur Newman, J. F. Turner.

Second row: Hugh Cope, W. H. Cook, Jr., Ed Dunn, Charley Busby, Clarence Faulkner, W. G. Speights, Grover Howell, O. H. Walker, C. H. Donaldson, Willie Sasser, Truman Bennefield, Luther Peyton, Mitchell Brown, W. R. Roberts, Louis McCarty, Chester Antley, Odeen Cobb, Carroll Thompson, J. F. Clite, J. H. Adams.

Third row: Creedy Brock, Fred Bynum, Elmer Farrer, Norman Smith, J. N. Jenkins, Zolon Robertson, Dewey Bynum, Malcom Norsworthy, T. W. Lane, W. A. Schrimpshire, J. W. Cook, Sr., Lewin Smith, Remus Parrish, D. W. Melton, W. S. Respess, Mason Adams, Herman Register, Lee Mobley, Jeff Walraven, Lester McKoon, D. B. Harrell, Barnett Sinquefield, Quincy Pettis.

Back Row: Irby Infinger, Dewey McDaniel, Ira Duke, Frank Waters, Ed Skinner, John B. Smith, A. A. Trammell, Agnew Hutchinson, Jessup Lolly, John Fuller, Flynn Galloway, Addis Tindell, John Abernathy, Jesse Cosby, Aubrey Gibson, C. Y. Stripling, R. F. Crews, Hubert Clite, James Johnson, J. N. Harrison, Jesse Hunter, C. P. Davidson, Felix Starling, Perry King, Harry Morgan.

to the overseers and class instructors calling attention to important needs in the development of the educational program are helpful. Over 250 subscriptions to trade magazines was the response to a letter calling attention to the valuable place occupied by our trade publications in stimulating thought about one's work.

Competition between classes for No. 1 and No. 2 shifts is sometimes very keen. The highest attendance reached has been in the two loom fixing classes when No. 1 shift had 89 and No. 2 shift had 77 present.

In groups as large as these, individual instruction is made possible by older fixers taking charge of parts of the group. The enthusiasm of the larger group and the lectures and explanations which can be given make it advisable in this case not to reduce the size of the class. Out of fifty loom fixers in the Columbus mill thirty-eight have been trained in this plant.

Fish fries and other recreational activities are occasionally a part of the class program, being initiated and paid for by the class. At the end of the past term a commencement banquet was given by the company for all of the classes. Judge A. W. Cozart, one of the best inspirational speakers in the South, delivered the principal address. Company officials and visitors interested in educational work were invited.

It is our plan for next term to have each major department responsible for its own training program,

This airplane view of the Columbus plant of Bibb Manufacturing Co. shows the spinning mill (one of the largest units in the South), the saw-tooth roof weave shed, and a portion of the village . . . . . .

under the direction of the overseer. Instructors may come from a different department, if necessary, but the competition between departments and the personal interest of the overseer in his own training program indicates that this plan will be effective. This could not be done in some plants as local needs and personnel will vary the plan to be used.

The meeting places for the classes are in the school building, in a former nursery building, in the mill, and sometimes, in good weather, on the lawn. Part of the time of each class is used for lecture, demonstration, and class instruction, both theoretical and practical. The practical fixing instruction is done mostly in the mill; however, we are now erecting two looms for instruction in the building which was formerly used as a nursery. Power is to be applied to these looms and the classes will tear them down and erect them for operation, repeating the process frequently.

"Cotton Mill Mathematics" by Quigley and Smith, "Cotton Mill Machinery Calculations," by B. M. Parker, and "Practical Loom Fixing" by Thomas Nelson, are the textbooks used, as well as instruction books supplied by the machinery manufacturers, and those developed by our own foremen-instructors.

The first young lady to receive a Standard Textile Diploma in the United States was in one of our vocational classes in Macon. She now occupies a position where this training is necessary for successful work.

One of the instructors of a large cotton mill mathematics class in the Columbus mill received his special training in the vocational school and earned diplomas in carding, spinning and plain weaving before becoming an instructor.

Many examples could be shown of the value of the school in aiding vocational placement. It is the human "supply room" to which we frequently go to find the right man for a job. Here an opportunity is provided for self expression that is not possible on any regular job. Talents are uncovered that might otherwise remain latent. The instructors are developed into better leaders and thinkers.

Education will always be our greatest resource. To quote a recent statement by a prominent editor: "We know of no greater satisfaction that can come to a man than that of having contributed to the progress of education."

We are indebted to Mr. Thomas H. Quigley and Mr. W. M. McLaurine for their valuable co-operative work in helping to make the vocational schools of our state a more important part of the educational system. The proper application of vocational training is necessary as a part of any modernization program for greater progress and achievement in the textile industry.

Book on Economics of Clothing and Textiles

"Economics of Clothing and Textiles" is the title of a new book by William H. Dooley, principal of the Textile High School, New York City. It is described as a keen and authoritative study and analysis of the particular business problems that affect the clothing and textile business, such as buying and selling, manufacturing, consumption, international trade and tariff, banking, anti-trust laws, style, cycles of depression, etc. The chapter headings include the following phases of the general subject: Fundamental Principles; Psychological Basis of Clothing; Sociological Basis of Clothing; Consumption of Clothing and Textiles; Development of the Production and Manufacture of Textiles; Business Organization—Textile and Other Industries; Buying and Selling; International Trade; Money and Credit; Research and Investigation; Patents, Trade-Marks and Designs in Textiles; Accounting and Cost Finding; The Business Cycle; Transportation; Advertising and Business Ethics; Distribution of the Social Income.

The volume is prepared in the form of a text-book, and is readily adapted to group as well as individual study. It contains 693 pages, and is well illustrated. The price is $5.00 per copy. Copies may be secured from the publishers, D. C. Heath & Co., 285 Columbus Ave., Boston, Mass., or through COTTON'S Book Department.

* * *

Dean Nelson Studying Foreign Textile Schools

Dr. Thomas Nelson, Dean of the Textile School of North Carolina State College, sailed from New York on June 16 for Glasgow, Scotland. He was accompanied by Mrs. Nelson and his daughter, Miss Mary. They will visit Dean Nelson's old home in Preston, England, and Mrs. Nelson's brother at her old home in Douglas, Isle of Man.

During the summer months Dean Nelson will visit the leading textile schools in England, Ireland, and Scotland, and study the latest developments and trends in textile education. He also plans to visit some of the fancy mills in England, and if time permits he will visit some of the French textile schools and the leading textile museums in France and the British Isles.

Being thoroughly progressive, Dean Nelson desires to see, first hand, what the leading textile schools in other countries are doing so that he can continue to keep the textile school of North Carolina State College on a par with any similar institution in America.

Sizing Defects in Gray Goods

Gray goods manufacturers should be held as responsible for sizing and other materials that are difficult, or impossible, to remove in the finishing processes, as for imperfections of fabric structure, according to an editorial in the July issue of "Textile Research", the official organ of U. S. Institute for Textile Research. It is claimed that "Gray goods that contain mineral or vegetable oils, waxes, gums, or other materials that are not readily soluble or emulsifiable in the finisher's regular 'prepare' are not 'satisfactory commercial deliveries.'" U. S. Institute has prepared a bulletin covering "Sizing Ingredients That are Partly or Wholly Insoluble, and Those That are Soluble or Emulsifiable" that may be had by addressing the secretary at 65 Franklin St., Boston, Mass.

Other articles appearing in the July issue of "Textile Research" are the following: Effect on the X-ray Pattern of Drying Caustic Pretreated Cotton, by Bancroft, Calkin and Stillwell; The Microbiology of Textile Fibres by Bryce Prindle; X-ray Analysis of Textile Fibres by Wayne A. Sisson; Relation of the Sheep's Health to the Growth Rate of Wool by J. F. Wilson, and the regular abstract section covering scientific textile research throughout the world.

COLLECTIVE BARGAINING
1. The Employee Representation Plan

By Tom M. Girdler

Chairman of the Board and President, Republic Steel Corporation

THIS article by Mr. Girdler, and the one immediately following by Mr. Connery, are reproduced by permission from The Rotarian, official magazine of Rotary International, Chicago, Ill., which presented them in its July issue as a measure of clarifying public opinion on this vital and timely question.

We present this exchange of opinion to textile manufacturers in order to provide interesting information of an authentic nature on both sides of a question that is vitally important in this industry under present conditions.—The Editor.

◆ ◆

THE current widespread epidemic of strikes or threatened strikes in the United States may have at least one useful result—it may help to clarify the issues involved and to bring before employees, employers, and the public at large the actual nature of the controversy existing between leaders of organized labor and leaders of industry.

The experience of the steel industry is particularly illustrative of these points.

From propaganda put out by labor leaders, many people have, no doubt, gained the impression that the steel industry is opposed to collective bargaining.

This is not true. The industry stands squarely in favor of the right and the practice of collective bargaining with its employees.

The point in controversy has to do with the *form* of collective bargaining which is to be adopted.

The steel industry believes that the employee representation plan represents the best form of collective bargaining, for employees as well as employers, which has thus far been devised.

Labor unions, however, chiefly those affiliated with the American Federation of Labor, temporarily taking a dominating position under NRA and seeking governmental support out of all proportion to their memberships, are attempting to force the "closed shop" upon employees and employers alike, and claiming the exclusive right to represent employees in collective bargaining.

This is as objectionable to the great majority of the employees as it is to the employers. In the steel industry, only a small minority of the total number of employees belong to trade unions.

The steel industry has refused to recognize the unions because trade unionism means eventually the closed shop—and the closed shop, in the opinion of the industry, is absolutely contrary to the best interests of both employees and employers and in violation of Section 7-A of the National Industrial Recovery Act, which guarantees to all employees free choice of method of bargaining with employers.

Furthermore, in opposing the closed shop and union recognition, the steel industry has in mind past experience with American Federation of Labor unions—and that experience, with its examples of jurisdictional disputes, strikes, excessive dues, fines and penalties, limitation of output, philosophy of conflict, and intrusion of agents having little or no acquaintance with the industry or the rank and file of the employees they claim to represent, has not been conducive to the satisfaction of the employees or of the management.

The majority of employees in the steel industry, as well as the employers, believe that collective bargaining may best be accomplished in the interests of the employees themselves, as well as those of business and society at large, by the establishment of self-governing employees' organizations within the industry, whereby employees are free to elect representatives to deal with employers upon questions of wages, hours, working conditions, and all other matters of mutual interest.

Contrary to general opinion, the employee representation plan of collective bargaining is not new. It has been in use for years in many industries, including steel.

Describes Employee Representation Plan

The employee representation plan is often referred to as a "company union". To the extent that this term indicates an organization of employees of a company for collective bargaining, this name is correct. However, the implication that management controls the affairs and decisions of the employee organization is absolutely unwarranted. In order for an employee representation plan to function effectively, it is absolutely essential that employees have the right of independent meetings, elections, and conclusions.

Under the employee representation plan, the employees of a company elect annually a definite number of representatives who will represent them in dealings with the management.

Supervisory employees, foremen, officers, and the

like, are not permitted to vote or to act as employee representatives. Elections are entirely in the hands of the employees and conducted by secret ballot. The company takes no part in the elections.

The representatives elected select their own chairman and appoint their own committees and subcommittees. Regular meetings of these committees are scheduled for the discussion of any problems which may be raised by the employees. At agreed intervals, employee representatives meet jointly with representatives of the management in order to facilitate the placing of questions raised by employees before the management, and to maintain a mutual interchange of opinions and ideas.

Any employee who has a suggestion to offer, or believes that he has a grievance, may immediately bring up the matter with the proper employee representatives' committee, who may, in turn, take the issue to the management. Decision is then reached by mutual discussion between management and employee representatives. If, however, an agreement cannot be reached, the question may then be referred for arbitration.

Questions settled and discussed under the employee representation plan include wages, hours and working conditions, safety, health, sanitation, athletics, recreation, education, housing, shop practice, the condition of the company's business and the like. The most intimate details of the business are discussed under these circumstances with a mutual understanding and confidence which would not and could not be done under any other arrangement.

Participation in an employee representation plan is purely voluntary. An employee may belong to a different type of labor organization, if he so chooses. There is no discrimination against him for that reason. The principle of free choice is one of the foundations of the plan.

However, in most plants where the employee representation plan has been functioning for any substantial period of time, by far the great majority of employees participate in the plan—and for that reason their representatives possess a unified opinion sufficient to lend the necessary weight to their conclusions.

Compares Employee Representation Plan with that of Union Labor

It is of particular importance to review the advantages which the representation plan affords to the employees themselves—as contrasted with the method of collective bargaining offered by union labor. Among them are the following:

(1) Union labor appears to have been built upon the theory that the interests of employers and employees are inevitably antagonistic—that there must be in the nature of things, a perpetual conflict between employer and employees. This accentuates class differences, promotes bitterness and hostility, fosters dissatisfaction and friction, and drives a wedge between men and management. It is productive of no profit to anyone concerned.

The employee representation plan builds harmony, confidence, and understanding between employer and employees, and gives workmen a means of collective bargaining which will work to the mutual benefit of both employees and management.

(2) Under union labor, employees are represented by outsiders, often men of no mill experience, little familiarity with plant conditions, and interested chiefly in collecting dues and building up their own incomes and importance.

Under the employee representation plan, employees are represented by men whom they know personally—men who are thoroughly familiar with local conditions and know what they are talking about from experience.

(3) Leaders of union labor, in order to justify their existence, frequently deliberately create dissatisfaction, strife, disorganization, and strikes—making promises as to wages, hours, and working conditions which are impossible of fulfillment, simply in an effort to try to maintain their following among the men. The result is often destruction of confidence, falling off of business, decline in orders, and the necessity of taking men off pay rolls. Thus organized labor in the long run defeats the best interests of the employees themselves.

Under the employee representation plan, employees as well as employers work together to preserve confidence and harmony which will make for better business and, in the long run, for better wages.

(4) Under union labor, when a question comes up between men and management, the union leaders who are supposed to represent the men may be miles away in a different city, and days may pass before they can take up the question with the management. When they do arrive, the union leaders may not know local conditions, and may not make allowances for variations between different plants or different cities. Labor unions are too large for their men to give day-to-day consideration to issues arising at various plants.

The employee representation plan provides for day-to-day action. Issues which arise may be discussed and settled immediately, and local matters pertaining to each plant may be taken up and settled in a manner satisfactory for that particular plant.

(5) Under union labor, an employee has no right as an individual. He is not allowed to take his case before his employer or make his own bargain with his employer, if he prefers to do so. Furthermore, under the closed shop demanded by the union, a man must belong to the union or lose his job.

Under the employee representation plan, any employee may present his individual case at any time. He may participate in the plan or not, as he chooses. He is guaranteed his right to free choice and free action.

(6) Trade-unionism strives to prevent men from broadening their experience or increasing their usefulness. It allows no man to do any form of work except that which falls under his own trade. It objects to promotion on the basis of reliability or merit.

The employee representation plan gives free play to individualism, encourages the use of the incentive

system, permits recognition of superior ability, and offers employees opportunity for advancement based upon capacity for leadership, proven intelligence, and production efficiency.

(7) Payment of dues is the one essential qualification for membership in a labor union. Under a closed shop, if a union man does not pay his dues he is not only forced to leave his job, but is prevented from securing any other job in a union shop.

No dues are required to participate in the employee representation plan. Under this plan, the management recognizes the right of employees to elect representatives, to bargain collectively, and to consider all problems having to do with employee welfare, as an *inherent privilege.*

How the representation plan actually works out in practical operation may best be shown by actual facts and figures.

A survey made by the American Iron and Steel Institute of activities in employee representation plans during the first four months of operation under the Steel Code demonstrates how successfully these plans are meeting problems arising in the day's work.

Reports were received from large and small plants which employ 285,000 workers, nearly 70 per cent of all those then employed in the industry. During the four months covered by the survey of July to October, 1933, some 1,361 meetings were held and 4,082 cases were referred to representatives or to committees for consideration.

There was actual collective bargaining between employees and management in all the cases considered with the result that employees' requests were granted in 70 per cent of such cases; 18.3 per cent of them were decided in favor of the employers; 4.6 per cent were withdrawn and 7.1 per cent were compromised.

The experience of our own company is typical.

During the first ten and a half months the plan was in operation, 1,536 different matters were discussed and settled. Of this number 72.5 per cent were settled in favor of employees, 12.5 per cent were settled in the negative, 3.3 per cent were withdrawn by the employees, 3.7 per cent were compromised, and only 8 per cent of the total cases were still pending settlement as of May 1, 1934.

It is especially interesting to note that 1,142 cases, or 74.3 per cent of the total, had to do with employment, working conditions, wages, safety, and welfare, which are, of course, the most important matters in which employees are interested.

The results obtained show that employee representatives know the needs and views of employees, and have not hesitated to step forward and present these needs and views to management—and they have gotten remarkable results.

Anyone who has seen the representation plan in operation, and has watched employee representatives stand up in joint meetings with management representatives and state what the men wanted and why they wanted it, would be amazed at the intelligence and effectiveness with which the employee representatives function, and would realize in an instant how utterly unfounded were any suspicions of company domination.

These men are not afraid. They have no reason to be. They tell their side of the story to management without hesitation, and in no uncertain manner. Management representatives act in the same spirit.

One important result of this complete frankness is that the employees are taken into the confidence of the management and told facts and figures having to do with costs and earnings. In this way the men obtain a reasonable understanding of their employer's production and financial problems, so that they can realize the nature of the factors upon which employers' decisions are based. A situation of this sort would be utterly out of the question under a union labor regime.

This is simply another instance of the manner in which the employee representation plan substitutes for the old spirit of conflict the new spirit of co-operation and conference in industrial relations.

In the steel industry, the great majority of the men—to the best of our information—have already indicated that they prefer the employee representation plan. Neither these employees nor the management will be willing to submit to the dictates of a minority, dominated by outside organizers, who are urging the retention of obsolete and antiquated methods of employee organization which have neither excuse nor usefulness in an era of enlightened industrial relations.

Cotton Cement Sacks

More than 100,000,000 cotton sacks were used for shipment of cement in 1933, according to figures furnished by cement manufacturing interests in discussing the use of cotton bags for the packaging and shipment of cement at tax hearings earlier this year in Washington, D. C., of the Agricultural Adjustment Administration, U. S. Department of Agriculture.

Now that the Government processing tax is no longer attached to large size cotton bags, the cotton cement sack's advantage of economy, which was emphasized in the testimony given by cement manufacturers, is now especially pronounced. It was testified at the hearings that next to bulk purchases, buying cement in cotton bags is cheapest. This is because cotton bags are returnable by the user to the cement plant at the price charged for them when cement shipments are made. The other commonly used type of container is not returnable and represents a current cost of about 2½ cents per bag over the cost of cotton-packaged cement, because of the rebate for emptied cotton bags. On purchases aggregating 100,000,000 bags, the payment for the competing container would add $2,500,000 to the cost of cement to the consumers compared to its cost if packed in cotton sacks.

The cotton cement bag, according to cement manufacturers, can be used seven or eight times for shipment of cement, whereas the competing bag is a "single trip" container without reuse value. Another advantage conceded to the cotton sack is that it speeds operations at the cement plant because cotton bags can be filled more rapidly than other sacks.

COLLECTIVE BARGAINING
2. Trade Unionism

By William P. Connery, Jr.
Chairman, Committee on Labor
United States House of Representatives

COMPANY unionism—the so-called employee representation plan—is, in the opinion of millions of industrial workers, nothing more than a polite definition of modern industrial servitude. Company unions are tolerated usually in those instances where the workers, in order to feed, clothe, and shelter their families, must accept such employment conditions or depend upon public charity, something abhorrent to the self-respecting industrial worker.

Company unions, as such, were not generally deemed necessary or profitable by employers of labor in the United States until after Congress had enacted the Norris-LaGuardia Anti-Injunction Law which made illegal and non-enforceable the Individual Contract System of Employment.

Prior to the passage of the Norris-LaGuardia Anti-Injunction Law, some employers demanded of workers who sought employment a contract whereby the worker, as a condition of securing and retaining his job, agreed in writing that he would not, while employed, and, in some cases for a definite period after leaving his job, join a labor union. Such contracts in reality abridged the freedom guaranteed to every American citizen by the Constitution.

The National Labor Board is composed of an equal number of employers of labor and an equal number of representatives of workers. After a year's study of labor disputes and forms of labor organization with which that body came into contact, the National Labor Board defined the meaning and purposes of company unions as follows:

The Board has ruled that organization is a matter exclusively within the control of the employees. It has counselled a hands-off policy on the part of employers. It has condemned the initiation of a company union by an employer and participation by him in its affairs, where such initiation and participation has, in effect, been an interference with the employees' self organization, or resulted, in fact, in the domination of the organization by the employer, and where the employees have not clearly and freely consented thereto. The Board has held that the fact that an election of representatives has been conducted under a plan, does not constitute an approval of the plan itself.

The chairman of the National Labor Board, the Honorable Robert F. Wagner, member of the United States Senate from New York, referring to company unions has often said: "Nearly all of these so-called company dominated unions have been organized since the enactment of the National Industrial Recovery Act by the same type of employers who, before the enactment of the Act, refused to permit their workers any form of organization for the purpose of bargaining collectively."

Chairman Wagner, referring to his experience with labor disputes, as chairman of the National Labor Board, has further said: "Typical of the cases which appeared before the Board, wherein the workers were referred to as members of a company union, we found that the workers, while standing before a machine or while at work, were handed a copy of a constitution by the foreman, or, in some cases by the employer himself, with the statement that the worker was now a member of the 'union' and that the dues for the maintaining of such organization would be deducted from his pay envelope. When the workers had asked when the meeting to elect officers would be held, they were told that there would be no meetings, that the officers had already been selected by the employer. It was a case if you want to hold your job, accept this type of 'union' as your representative or find a job elsewhere."

Imagine, if you can, with ten to twelve millions of workers unable to secure employment, what freedom of choice is left to the worker with several hungry mouths at home to feed?

In some cases, workers have contended that, in industries operating under a Code, where the employers have subscribed to Section 7A of the National Industrial Recovery Act and, in fact, embodied that section in the Code which they had voluntarily submitted to the National Recovery Administration. the workers have a right to choose a union to represent them. Some workers have even gone so far as to argue that they have a right, under Section 7A, to hire those whom they wish to represent them. In certain cases, where the workers were partially organized and had virtually agreed that they would ask the representatives of a legitimate trade union to represent them, the employers had stated that they could not continue in their jobs unless they accepted the company dominated union.

In many such cases, the workers refused to continue to work and their grievances were presented to the National Labor Board for adjudication.

During the hearings on the Wagner Labor Disputes Act, the constitutions of the company dominated unions of six of the largest employers of labor in the United States were presented to the Senate Committee on Education and Labor.

Workers have invariably taken the position that the workers do not attempt to interfere with the

election or the selection of those who the owners of a plant, mine, mill, or workshop, decide should be placed in charge, neither do they demand that such officials shall be selected alone from those already employed.

The workers contend that they should have the same freedom of choice in selecting or electing those to represent them for collective bargaining so long as they, the workers, pay them for the services which they render.

Workers are not and never have been denied the right to join such fraternal organizations, such athletic organizations, or such church organizations as they choose. But workers were denied the right, yes, the freedom of joining labor unions of their own choosing.

Employers are not and were not interested in preventing workers from joining fraternal, athletic, or church organizations as these organizations did not and do not ordinarily interfere with the unsanitary conditions which exist in the workshops; they do not ordinarily interfere with the arbitrary right of petty bosses to hire and fire at will without, in too many cases, any legitimate cause; they do not demand ordinarily that the employers increase wages or reduce the hours of work. In short, these fraternal, athletic, and church organizations, which bodies serve a most useful purpose in the community and which have been a great help in relieving distress and discomfort in millions of the workers' homes, do not interfere with industrial conditions as they rightfully contend that they do not cover that field. That field is left to the legitimate trade unions.

Discusses "Independent Unions"

There are some instances where, because of local or other peculiar conditions, workers, with perfect freedom of choice, maintain, at their own expense and of their own free will, independent unions. Such organizations are not affiliated with the American Federation of Labor or any national or international union, and, in some cases are not even affiliated with similar groups employed in the same industry even in their own state. Yet, these independent unions are not company unions or company dominated unions. Such independent unions are wholly independent and are free from any employer's influence and serve only the workers themselves.

As an illustration, there are a number of independent unions in my home city, Lynn, Massachusetts. The members of these independent unions are employed in the shoe shops and in the plant of the General Electric Company.

The officers of these independent unions, to which I have just referred, are paid by the workers themselves. The members of these independent unions meet regularly and act free from the influence of any employer. They adopt their own laws and conduct their own affairs, as do the members of the American Federation of Labor and the Railroad Brotherhoods.

A company union is a body of workers, banded together, directly or indirectly, by or for the employer for the sole purpose of preventing a majority of such workers from forming or joining a legitimate trade union of their own choosing.

In almost every instance we find the officers of the company dominated union are hand picked by the employer or the employment manager. The salaries and the expenses—the expenses generally being considerable—are paid directly or indirectly out of the funds of the employer.

The real purpose of the company dominated union, the reason the employers defray all expenses, if necessary, of maintaining the so-called union being that members of the company dominated unions cannot seek higher wages or shorter work-weeks or more sanitary working conditions in the plants. The expense of maintaining these company dominated unions is not deducted from the profits of employers. The expenses are charged to operating costs, labor costs, or deducted from taxes and, are, in reality, paid by either the consuming public, the wage workers through the forced contribution of dues deducted from their pay envelopes, or, through the workers being forced to accept lower wages than they would have received had they been members of a legitimate trade union of their own choosing.

The question of company dominated unions does not alone involve the freedom of the workers, but, of late, even the stockholders in some of the large concerns are questioning the right of those entrusted with the management of the enterprise to use the company or corporation funds for the maintenance of company dominated unions.

The consuming public, yes, the shareholders in a public utility, may soon enter the courts to ascertain whether or not the officers of the employing concern can charge to operating costs the transportation of a hundred or more employees—officers and members of a company dominated union—who, not only travel in first-class Pullman cars, but, who live at the most expensive hotels, all at the cost of either the shareholders or the consuming public. In addition thereto, these officers and members of the company dominated union, receive their regular pay although they are not even in the cities where they ordinarily work for weeks at a time.

What explanation have the officers of a corporation for such expenditures?

Is it possible that the shareholders of corporations, who ordinarily are looking for the largest possible profits, will approve such expenditures on the part of the corporation officials? Is it possible that public service commissions of the various states or nation will approve such expenses as proper charges against rates charged to the consuming public?

Prior to the recent order of the railroad co-ordinator, railroads were known to spend large sums of money yearly for the maintenance of company dominated unions. As some ninety per cent of the stock of most of the railroads in the United States is owned by the general public and all the costs of operation are charged to the public which uses the railroad, is it possible that the public and the shareholders have any control over the manner in which the monies which belong to them are being expended?

The only possible explanation which the officers

of corporations can give to either their shareholders or to the public for the expenses they incur in maintaining company dominated unions is that through such agencies, they pay less wages to their workers than they should pay.

Such an explanation, of course, means nothing other than the corporation confesses to having exploited their workers. The workers, through such company dominated unions, receive less wages or work longer hours than the workers who, through their membership in legitimate trade unions, receive for the same service.

As I have stated, company dominated unions are, for the most part, of recent origin. Employer domination of workers through similar means is not of recent origin.

Even before the passage of the Norris-LaGuardia Anti-Injunction Act and before the enactment of the National Industrial Recovery Act, a few large employers maintained company dominated organizations. In those days they did not call them unions; they were called athletic associations or mutual aid associations.

One large concern, employing several thousands of workers, maintained one of these so-called athletic associations wholly at the expense of the workers. Every worker, as a condition of employment, was forced to join this athletic association. The dues for membership were one dollar per month, the dues being deducted from the pay envelope of the workers. Assessments—there were many—were also deducted from the pay envelope. This association had 12,000 members as the employing concern had 12,000 workers. This association, therefore, had a monthly income of $12,000.

The concern operated an average of ten months each year, so the association had a yearly income of some $120,000.

How was this money spent? Twenty-five thousand dollars was paid yearly to a president-manager, who was selected by the employer without any consultation with any of the workers. Fifty thousand dollars was spent yearly for the maintenance of athletic teams which brought to the employer considerable advertising value, without the slightest cost to the employer.

The balance, other than $10,000 which was laid aside each year to accumulate to insure the payment of the president-manager's salary, was spent to pay the expenses and costs of artists of note in the community for the entertainment and pleasure of the employer's family and their guests. The workers were not invited to these select entertainments.

The Congress of the United States has finally decided that company dominated and controlled unions are illegal and must be eliminated.

Those employers of labor who sincerely contend that workers will voluntarily agree to maintain membership in company dominated and employer controlled unions seemingly have little knowledge of the average industrial worker's desire for freedom of action and freedom of choice.

When the government, through the National Labor Board, the Department of Labor, or such other agency as the President may designate, permits these workers who now are not members of legitimate trade unions as Congress has decreed, an opportunity of election of representatives of their own choosing, such election to be held off the premises and free from employers' coercion, the death knell will have sounded for company dominated unions in the United States.

Improving the Quality of Raw Cotton

Recognizing that obtaining a higher quality of raw material is an important way of aiding the cotton producer and the textile industry, the Textile Foundation recently has ear-marked some of its funds for aiding research on methods of improving the quality of raw cotton.

Decision to go forward with this project was reached after Secretary of Agriculture Wallace and Stuart W. Cramer of Cramerton, N. C., as a subcommittee of the Board of Directors, developed convincing evidence of the value of such practical research. In the course of the preliminary inquiries, Messrs. Wallace and Cramer were fortunate in securing the advice of men of professional and practical experience.

Part of the fund is being used during the current year to help finance comprehensive regional varietal trials of a number of the more or less standard varieties of cotton by the Bureau of Plant Industry of the U. S. Department of Agriculture and the State experiment stations in North Carolina, Tennessee, Arkansas, Oklahoma and Texas.

It is generally recognized by the cotton trade, both in the United States and abroad, that the spinning utility of the great bulk of the cotton now grown in this country is far below what it should be. One of the principal causes of this poor quality is that too many different varieties are grown in the same locality. The result is that the cotton becomes mongrelized through cross pollination between different varieties and by the mixing of seed from different fields at the gins.

More than 1200 different names for cotton varieties being grown in the United States have been recorded and about 400 of these have been added in the last 10 years. Only about 5 per cent of the approximately 600,000 tons of seed required to plant the crop comes from seed breeders, the remaining 95 per cent being largely of such mongrelized gin-run stocks. Seed mixing and primitive cultural practices have resulted in millions of dollars needlessly lost every year to the textile industry and to growers, through low yields of short, irregular fiber.

The length of staple and quality of the crop can be improved rapidly through a larger use of pure seed of superior existing varieties. Premium varieties do not deteriorate or "run out" if the seed is kept pure. The establishment of communities within which only one variety is grown and ginned aids in providing large supplies of pure seed. Many single-variety communities have been organized during the past several years and the number is increasing as the practical advantages are becoming better recognized. In order to insure the agricultural as well as the textile value of the varieties selected for community planting, it is necessary to have adequate experimental data on the varieties before they are recommended.

More Thoughts on Labor Unions

By the Author of "Some Thoughts on Labor Unions"*

For a good many years the southern textile mills have managed to get along comparatively free from labor troubles. If mill workers were dissatisfied with their jobs they quit them and looked for work elsewhere; if conditions at some certain plant became too bad, the help generally managed to organize a walk-out in protest against the objectionable conditions. The professionally operated labor union was comparatively rare in the South for the simple reason that southern manufacturers and the more intelligent southern help realized that professional trouble makers whose business was stirring up discontent, and whose living depended upon it, were not likely to prove helpful in maintaining satisfactory relations between the people who ran the mills and those who worked in them.

Under present laws the bars are down to admit professional organizers to gather such followings as they can in any manufacturing plants. This being the case, there is a very determined effort being made by national labor organizations to gather into their folds as many cash customers as possible. At this time it behooves everyone who is interested in the welfare of the textile industry, and particularly the southern branch of that industry, to do a little plain, serious, sensible thinking on this matter of labor unions. Since the apostles of the unions are among our people preaching a labor crusade, we certainly ought to examine into the nature of this crusade and the motives impelling its organizers and the probable benefits and dangers which may result therefrom.

The whole subject of labor unionism is so controversial that it is difficult to stand on solid ground when discussing it, but there are certain undeniable rights which all men are guaranteed under the American Constitution; rights which they may exercise whether they are millionaires or objects of charity. When any organization, whether it be social, fraternal, religious, political, or otherwise, is formed without intention to violate any constitutional rights of those not belonging to this organization, there is no question about the right of any person so desiring to belong to such an organization. A man has as much right to belong to a labor union as he has to join the Masons, the Elks, the Methodist Church, or the local Volunteer Fire Department. The Constitution guarantees the right of peaceeable assembly, and the members of a labor organization have a perfect right to hold meetings; to discuss methods of furthering the purposes of their organization; to solicit members, or do anything else which is proper and lawful. Membership in a labor union does not confer upon any person or group of persons the right to destroy property, or to interfere with the liberties and privileges of persons not belonging to their union. Neither does membership in a labor union release a person from responsibility for the violation of any laws for which violation that person could be punished if he did not belong to a union.

Some serious thinking . .

Whatever the purposes of a labor union, they should be accomplished by orderly and legal process, and it is undoubtedly true that most of the hatred which employers have felt for labor unions is due to the fact that most professional labor organizations hold themselves above the law in one important respect. Practically all national labor unions more or less openly claim the right to violently prevent an employer from operating a plant where a strike is in progress, and in all too many instances the responsible heads of the labor organizations have either openly or covertly incited the striking workmen to violence when peaceful methods have failed to win a strike.

Stirring up discontent

No reasonable person is likely to question the right of a man to quit his job, and no reasonable person should question the right of another man to take it. Just because one man is dissatisfied with a job is no reason that plenty of others will not be glad to get it. Another cause of bitter resentment on the part of employers is the utter irresponsibility of labor organizations. The unions are clothed with vast power, yet are subject to practically no restraint. The employer owns property, has money in the bank, and is otherwise financially responsible for the performance of a contract or for the damages which he may do. If an employer willfully or through negligence injures an employee, he can be held financially accountable. If an employer causes injury to an employee's property, he can be required to make restitution. On the other hand, the employees when organized into a labor union, usually feel complete immunity from any responsibility for illegal acts. They may do untold damage to valuable property; they may ruin a prosperous business through a prolonged strike; they may do bodily damage to their employer and his representatives—yet there is no means of calling the union, as a union, to account.

This seems to be the inherent weakness in the whole labor union structure. When the state grants to a corporation a charter which conveys certain rights and privileges, it likewise requires that the corporation have a reasonable amount of capital to assure its ability to assume the responsibilities which go with

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the privileges conveyed. Until labor organizations can be so constituted that they are amenable to financial responsibility for their acts, there is going to be a continued general impression among responsible persons that a labor union is a racket. It is always dangerous and contrary to the public policy to confer authority without exacting responsibility. It makes no difference what patriotic or praiseworthy principles an organization may proclaim, it should not be granted authority unless it can be held strictly accountable for the results of the exercise of that authority. Certainly no organization can claim more praiseworthy objects than a church, yet for centuries the Christian Church wielded some of the most terrible powers for the oppression of humanity that the world has ever seen. The most commendable patriotic organizations have degenerated into instruments of oppression when freed from responsibility. There is nothing sacred or inviolable about a labor union; it has no rights which its individual members do not have, and if it attempts to exercise privileges which it does not possess, and damage results from such acts, there should be some means of holding the organization collectively responsible for the damage.

The right to organize . .

The early labor unions were exactly what they purported to be—local organizations to enable workmen to deal collectively with their employers. They enabled the help, in any given plant or locality, to present a united front when making demands upon their employers for better wages or better working conditions. The officers served without pay, and there were no dues beyond a small fee which went toward the rental of a place to hold meetings. There were no paid organizers; no professional trouble makers. The organization was local and dealt with local affairs, the true function of a properly organized union.

In their modern conception, labor unions have developed into large national organizations collecting huge sums in cash revenue from their membership. Viewed in this light, the present day labor union should be considered by the prospective member in the same manner that he would look upon a request to join any other dues-collecting national association. There are many of these which employ paid organizers to persuade people to join them, and the modern labor union is organized on just about the same basis. When a paid organizer for a labor union comes into a mill and attempts to persuade the employees to join his union, they may be quite certain that he is not actuated by any passionate yearning to redress the wrongs of the working man. The only burning enthusiasm that he nourishes in his bosom is that which comes from the collection of two pay checks; one from the mill for the job he holds, and one from the labor organization which employs him. Likewise, it is very doubtful if the heads of the union are as much interested in the local problems of any particular unit of their unions as they are in maintaining a full membership in their unit, and the collection of dues.

When mill hands are approached by union organizers, they should bear these things in mind. They should remember that the organization they are being asked to join is a dues-collecting organization, and that the organizer is being paid so much a week or so much a head for doing his work. Substantially, there should be no difference in the attitude of a man solicited to join the labor organization with its headquarters a thousand miles away, than there should be in that of the same man asked to join a fraternal organization which wants him to pay dues into a distant treasury. The organizer for some high sounding fraternal organization like the Amalgamated Order of the Sons of Neptune would find the going pretty tough in the average mill village, and the same organizer that calls his outfit the Amalgamated Order of Consolidated Textile Workers should find the going just as tough if he has nothing more to offer than a new name.

Labor problems are local problems; they must be settled locally, and on a basis acceptable to the persons involved. The less outside interference the better.

If southern mill help and their overseers will take a common sense view of the whole labor union proposition, there will be no unnecessary labor trouble in the South. A purely local organization is likely to feel some responsibility for trouble which it may cause. Where the leadership of a local organization is in the hands of outside parties who have no local responsibilities, they can stir up trouble to further their own ends and if the situation gets out of hand, they can pack their bags and buy a ticket home; leaving the trouble they started to take care of itself.

Inciting to violence . .

It's almost contrary to the nature of things that a labor union in a mill will have competent and responsible leadership. Men who have shown intelligence and a capacity for leadership are not long in finding promotion to jobs -as foremen and superintendents. The natural leaders in the organization thus being ineligible to membership in the union, its management generally falls into the hands of young and inexperienced help with plenty of enthusiasm, but little wisdom, or into the hands of older employees, disgruntled at their failure to get better jobs, and anxious to obtain by force what they have been unable to get by merit. With weak and inexperienced local leadership, the real management of the union almost invariably falls into the hands of some unscrupulous outsider who is solely interested in the possibilities offered. To make it pay, there must be a constant appearance of necessity for this leader's help; to accomplish this, there must be perpetual trouble stirred up for the leader to settle. The more trouble he can stir up, the more likely he is to hang on to his job. This may be a fine thing for the professional labor leader, but it is not a good thing for the working people who live out of pay envelopes, nor for the people who furnish the pay.

Problems Confronting the American Textile Exporter

By Arthur Whiteside, Textile Authority*

THE textile exporter has probably much more competition from every other manufacturing country than any other single line of business or trade catering to foreign markets. High tariffs and lower production costs in every country except our own, are a serious condition which our textile exporters have to face.

The expanding industrial activity in the Orient carries particular significance to the textile exporter. Too few of us are aware that the Far East is advancing more rapidly than our Latin-American neighbors to the south of us; more rapidly perhaps than any other part of the world.

The large rubber works in Singapore, operating at the source of supply of raw materials and with cheap labor, are permitted to manufacture all types of rubber products below the cost of the rest of the world. China is gaining in industrial development each year and textiles are probably the largest item in the industrial scheme.

Many of these textile mills in China are controlled by Japan, and Japan itself has become the most serious competitor for export business of the textile industry. In Japan the textile trade amounts to almost 70 per cent of her total industrial output. Japanese production costs are the lowest, many operators working eleven or more hours per day for as low as 3 cents per hour. When we consider our minimum of 33 cents per hour and limitation to a 40-hour week, it presents our industry with an unparalleled condition.

For example, Japan can produce cloth, using American cotton, and place it in any port in the world for 50 to 60 per cent of our lowest price. With this situation is it any wonder that Japan is making such tremendous and rapid gains in her textile exports to almost all important foreign markets? Japanese cotton goods are shipped to Australia cheaper than those from England, in spite of the tariff differential—and woolen goods at prices which the Australians say are lower than the cost of the wool sold to Japan.

The obvious question is: How can they do it? There are rumors of government subsidy planned to establish Japan as a world textile market, no matter what the original sacrifice. The possible theory is, once Japanese textile business is established, they can get better prices and recover some of their losses, assuming losses are involved in their present operations.

The seriousness of the situation is brought closer home by the Japanese displacement of our textile sales to the Philippines, notwithstanding the free entry of our goods and the high tariff wall which was believed ample protection against Japanese or other foreign competition. Japan has in recent months been able to secure about 70 per cent of the valuable Philippine textile trade, leaving us with 20-25 per cent and with the threat of even lowering this share of the business. In February of this year Japanese shipments to the Philippines showed a gain of 650 per cent over the corresponding month of 1933. Japanese gains of textile sales to Central America run 3,500 per cent for February of this year compared with the same period for the previous year: in South America the gain is 300 per cent for February, but other months show even greater gains. In Europe the sale of textiles from Japan has increased 140 per cent and Japan has only begun to develop her market in Europe. The gain in Australia is over 500 per cent. And these gains have been made at the expense of England and America.

We in the United States are trying to get the world to see the folly of low prices, trying to raise our own costs and prices, trying to bring about greater employment of labor—but a competing force, such as the Japanese, may quickly tear down the industrial structure we are trying to build.

There has always been competition, and probably always will be, and the American manufacturer has generally been able to meet it on a sound basis. It appears the Japanese competition is another problem that needs government study, consideration and help. Our government, however, can help the textile export difficulties immediately and more directly—and the simple answer is processing tax rebates.

Penalization of exports is not permitted constitutionally, and Congress also realized when it instituted the processing tax that the foreign merchants would not have to pay it; could not, and possibly compete against foreign manufacturers. Considering this, the law provided that the processing tax was to be refunded to exporters on proof of exportation.

The tax is paid periodically by the fabricator of the raw cotton, generally at the end of the month of manufacture; the exporter pays the tax when the fabricated article is bought by him. When he shows the government proof of exportation of the goods he is entitled to a tax refund. But it has not proved to be so simple an operation because there has been no government machinery set up to refund this money. Congress provided for the machinery for collection of the tax but made no provision for the prompt return of the tax to the exporter.

Because export business is based on a fairly rapid turnover, this freezing of capital in export rebates has, with many exporters, become an important factor. Of course, the larger houses with ample capital can finance themselves over the period but with many of the smaller active firms, a fair portion of the working capital is now tied up in these processing tax rebates, jeopardizing their business seriously.

In all fairness, it should be said that those in

(Continued on page 89)

*Mr. Whiteside has written extensively on the subject of textiles and textile exports and has given a number of lectures on these subjects. He was one of the pioneers in this country in textile exports and has devoted more than twenty years to the business. He is active in the textile export business today.

The Use of Compounded Rubber Latex as a Textile Finishing Agent

By Herman Boxser

A DISCUSSION is given here of the somewhat new finishing agent. Its application in size and as a coating; the possibilities as to compounding at the mill, formulas, and general hints on handling are covered . . . . . .

THE use of rubber as rubber latex or in a dispersed form has found many applications of late in the textile industry. It is natural to assume that a substance possessing the characteristics of rubber, i.e., water repellency and its flexibility, and especially the fact that it may be applied to a textile in a liquid state like many other finishing compounds, should find development in the finishing of textiles.

The application of rubber latex in connection with textiles has been grouped by Austin (*Textile World* 81, 1019, 1932) as follows:

(1) for production of artificial leather
(2) non-skid rug underlaps
(3) backing and sizing for pile fabrics
(4) binding and strengthening agent for fabrics that otherwise would be too sleazy for rough usage
(5) double texture fabrics

Hauser (*American Dyestuff Reporter* 22, 119, 1933) has discussed the use of latex in combination with canvas for friction belts, as well as its use as a binding agent for applying flocked wool or cotton to a fabric base.

The utilization of rubber latex in the carpet industry has assumed a role of importance insofar as carpetings impregnated with it form their own selvages without unraveling, thus obviating the necessity of a binding. Carpetings of this type may be joined together by use of a latex adhesive without any evidence of a surface seam. If the proper latex is used for the backing of the carpet, the latex is waterproofed to such an extent, that it may be scrubbed on a floor without the moisture coming through.

Rubber latex has been an important factor in developing a new type of construction in carpets and pile fabrics. In this process, a hair batt is lain on a latex coated base and the fabric subjected to a vulcanizing process. In this particular development the use of looms for the production of the carpets has been done away with entirely.

In the foregoing few paragraphs we have presented a few uses of rubber latex in conjunction with textiles, but in the following it is our object to present to the finisher, a description of rubber latex, how it may be compounded, and the effect of various compounding ingredients on the characteristics of the resultant rubber film. This paper has been somewhat impelled by the statement of Austin that, "It is obvious that the textile mill is not equipped to develop the various compounds (referring to latex) required". We believe differently insofar as we feel that a textile plant possessing the facilities of the average sizing and finishing equipment as well as those of the average plant laboratory is in a position to develop rubber latex as a finishing agent to comply with a particular requisite of its products calling for the singular characteristics of rubber.

Rubber Latex

The presence of rubber latex as a processing agent has been made possible because of developments in prolonging its stability. Crude Para latex when stabilized with ammonia immediately following tapping will withstand reversion or coagulation for the interval of shipping time until it reaches a destination either in the Continent or in the United States, where it is subjected to further stabilization with ammonia. The Para latexes are white to greyish in color, and are found occasionally with a yellowish cast. Latex when freshly collected from the tree, may contain as high as 50 per cent rubber, but following stabilization the rubber content will drop usually to 40 per cent and under. As mentioned, this latex reaches the United States and is further stabilized and sometimes sold in this concentration of 40 per cent or under. In a number of cases before selling it is concentrated by various methods, or is compounded for a particular need.

The concentrating of latex is carried out by various processes, which may be subdivided as follows: (1) by creaming promoted by centrifugal force much in the same manner as a cream separator, (2) by filtration through unglazed porcelain while the latex is kept in movement, (3) by evaporation after the latex is stabilized by a non-volatile stabilizer like soap or sodium alginate.

Before proceeding further we would advance a few characteristics of water dispersions of rubber. These differ from latex in that the latter at no time in its processing has been reverted to the solid state, but has been kept liquid since its tapping from the tree. The water dispersion, on the other hand, is a stable dispersion of coagulated, smoked rubber plus various compounding ingredients, effected by mechanical means. These have been marketed by a number of the leading rubber companies already compounded, and they exhibit properties similar to rubber latex towards other chemicals. They are usually less expensive than latex and greater efficiency may be obtained by their use because of the greater rubber concentration of the majority of dis-

persions when compared to the ordinary 40 per cent latexes. Water dispersions of rubber usually yield softer films, but one of their drawbacks lies in that many of these are not as lightly colored as rubber latex and consequently will not yield the latter's clear films.

Rubber Latex With Starch

Rubber latex may be incorporated with a starch sizing to add flexibility and water resistance when padded to a fabric. Crude latex in admixture with a starch sizing will not waterproof a fabric but it will enhance its water repellency. However, if a compounded rubber latex, as we shall describe later, is used water-proofedness will be produced.

Rubber latex in mixture with starch is used extensively today as an adhesive. The mixture is not an easy one to produce, as many starch technicians will state. This is due to the action of a starch paste, although being in itself a protective colloid, in tending to coagulate latex, when added in a hot state. We have investigated the properties of various dextrinized corn starches as well as tapioca starch—starches extensively used for sizing textiles—in conjunction with rubber latex, and the results embody the following recommendations.

The latex should be first protected with a protective colloid such as glue, casein or gum tragacanth. Bone glue has been found to be an excellent protective agent as well as one exhibiting properties akin to a starch.

One part of a better grade of bone glue is heated, while stirring in 8 parts of water, to 140 degrees F. until all lumps have been dispersed, and a smooth thin paste results. A caution is that the glue should not be heated over 140 degrees F. since a decomposition of the protein results and any hardness produced subsequently is not comparable with one that is heated but to 140 degrees F. If the cooked glue is tested for acidity it will be found to be somewhat on the acid side. Any substance exhibiting an acid reaction should not be added to rubber latex, as acidity will tend to coagulate it. Consequently, the glue is made alkaline with .5 per cent solution of caustic soda, and cooled to about 110 degrees F. (We have often heard of the precaution against the addition of caustic soda to latex, but have yet to note any deleterious effects from the addition of small amounts of it.) The latex—4 parts of latex to one part of glue by volume—is then further stabilized with a small amount of ammonia, and then poured slowly while stirring into the glue. Thus we now have the protected latex mixture.

The starch (cornstarch cooked 1 pound to 1 gallon—tapioca starch 8 ounces to one gallon) paste is cooled to 140 degrees F. and an equal volume of water added. This should be made alkaline with a small amount of ammonia; the protected latex mixture is added to it slowly and stirred until a uniform mixture results. If this size mixture is padded on to a cotton fabric, a firm, flexible finish will result. Thusly, in a like manner it may be thinned to yield a desired firmness.

In adding a protected latex solution to a cooked starch, care should be taken that the size should not be too hot—not over 140 degrees F., since there is a liability of coagulation of the latex. Once a latex reverts or coagulates, there is little hope for its redispersion, since this may be carried out only with special equipment as that used for making water dispersions of rubber. However, there are certain indications of partial coagulation before a latex will completely revert. If upon the addition of the protected latex to the starch, a sudden stiffening of the latter is noted, we have an indication that coagulation is setting in. No further addition of latex should be made, but the starch should be further thinned with ammoniated water until it thins out evenly, and then the remainder of the latex is added slowly.

A size-latex mixture as prepared above will produce a water-repellent finish on a fabric but will not waterproof it. To produce a waterproof finish, a "curable" or vulcanizable latex must be used.

Compounding Rubber Latex

In order to compound crude latex for vulcanization, there are certain essential chemicals which should be present in the mixture at all times. These are sulphur, zinc oxide, and an accelerator. Sulphur chloride may be substituted for sulphur. Any other chemicals added are for the purpose of lending some desired property to the resultant rubber film.

Any substance added to latex must be water-soluble and completely miscible with it, in order to produce effective results. Sulphur and zinc oxide in their dry state are not soluble in water and therefore cannot be incorporated into latex as such. Sulphur chloride is miscible with latex, but because of its cost and its irritating action on the skin should be disregarded. Thus, the zinc oxide and sulphur must be placed in a water soluble state before their addition to latex. This is done by placing them in a colloidal state, and they are marketed as colloidal sulphur and zinc oxides and capable of being thinned to a great extent with water, before they fall out of solution. On a dry basis, the concentration of dry sulphur in the colloidal material is about 45 per cent by weight, while the zinc oxide runs about 54 per cent by dry weight.

The purpose of the sulphur in the mixture is to produce greater flexibility and toughness in the rubber film. To hasten this effect, zinc oxide is added. It may be termed a very slow accelerator in the vulcanizing or "curing" action of the sulphur on the rubber. However, to hasten the reaction between the rubber and sulphur to a greater degree a more rapid outside accelerator is invariably added as well. Water soluble accelerators are present on the market, which will cause the rubber to vulcanize at a temperature of 140 deg. F., and the writer has noted latexes compounded with these accelerators which vulcanized at oven temperature. A simple starting recipe for a vulcanizable rubber mixture is:

Latex (50 per cent)—one gallon
Colloidal Sulphur (45 per cent)—1¼ oz.
Colloidal Zinc Oxide (54 per cent)—2 oz.
Accelerator—½ oz.

In preparing this mixture, the colloidal sulphur and zinc oxide are first thinned separately with a portion of the latex before their addition to the major portion. The accelerator is first pasted with a little sulphonated castor oil, and then thoroughly dissolved in a small amount of water at 150 deg. F. The solution is then strained through a cheese cloth into the partially compounded latex. The latter is then stirred thoroughly to produce a uniform mixture.

If an accelerator which must be emulsified before adding to latex is used it should be emulsified with triethanolamine and oleic acid as follows:

Accelerator	100 pts.
Oleic	5 pts.
Triethanolamine	2 pts.
Water	80 pts.

The accelerator and oleic acid are thoroughly mixed and added slowly while stirring to the triethanolamine diluted with the water. The amount of this emulsion added to the latex should be based on the actual weight of the accelerator present in a specific volume.

For liquid accelerators, the dispersing of these in water with ammoniacal casein, is recommended. An agitator must be used in order to obtain a stable dispersion.

In order to prevent rubber films from oxidizing too rapidly, compounds called anti-oxidants are often incorporated into the latex batch. For the majority of water soluble anti-oxidants used with latex, the amount used is about double the weight of accelerator in the formula.

If this vulcanizable mixture is protected with glue in the same manner as the crude latex and then added to a size batch which is applied and dried into a fabric, a complete waterproof should result.

Care should be taken in drying fabrics impregnated with a starch-crude latex sizing on a can dryer. A crude latex film when subjected to heat has a tendency to become soft and sticky, thus tending to adhere to the dry cans. If the percentage of latex in the size batch is such that this occurs, the sticking may be overcome by powdering the cans with a small amount of talcum. With a tenter dryer, little difficulty should be encountered in this direction.

Coatings

In coating fabrics with latex for adhesive purposes or for producing protective films, it is desirable that greater amounts of latex should be carried to the material. This is accomplished by use of a thickening agent on the same principle as the use of a thickener in printing fabrics. A more concentrated latex may be used alone since it is naturally creamy and thick. A natural 40 per cent latex, however, must be thickened. Thickening agents include starch, water soluble resins, and colloidal clays. Where a coating is desired which overlooks the brittleness produced by a starch, then the latter should be used. Colloidal clays should be used when the natural flexible rubber films are sought. Much of the firmness as produced with a starch may be overcome by the addition of a softener, such as sulphonated castor oil. If an excess of the latter is used, tackiness in the crude rubber film results.

Of the clays, a good grade of colloidal bentonite makes an excellent thickening agent. A concentration of one pound to a gallon of water in admixture with one gallon of crude latex yields a viscosity which produces continuous films having good body. To produce the clay paste, the dry bentonite should be first pasted with a small amount of sulphonated castor oil thinned with a portion of the subsequent water to be used. The remaining water is then stirred in, and the mixture allowed to soak overnight for the lumpy clay to expand. On the following day, the paste is thoroughly mixed and then strained through cheese cloth before its addition to the latex. The straining is advised since dry unbroken clay will tend to dust when it is found present in the rubber film.

If it is desired that the film should be colored, an organic dye in solution may be added, but the greatest fastness is obtained by use of water soluble dispersed colloidal pigments which are present on the market.

Films produced from crude latex mixtures, as pointed out previously, will tend to grow tacky with heat. If this condition is undesirable a compounded latex must be used.

Wetting Agents With Latex

Recently, a number of wetting agents have been marketed especially for use with latex. These are of use when a thorough impregnation of a heavily woven cotton fabric is necessary. A wetting agent showing an acid reaction when in solution should be avoided. The best method of accomplishing a thorough impregnation of a heavy cotton fabric is first to boil it out thoroughly in soda and in a wetting agent, and after a thorough wash and nipping, it should be run through a pad in open width containing the latex and wetting agent.

If the material is but wetted in water and the wetting agent added to the latex bath, then the high speed of the pad should be diminished. Instead, the cloth in open width is run very slowly through the latex in order to insure a thorough soaking, and then through the nip.

Precautions in Handling Latex

(1). In handling latex, there should be a word of advice to the workman handling latex, and this is that he should abstain as far as possible from placing his hands in the raw latex. The reason for this is that in many cases there is an acidic reaction from the perspiration on the hands, which tends to cause reversions. Cases of latex coagulation have been reported due to this cause.

(2). Rinds and latex films that are noted on the surface of a latex bath should be picked off, since these hasten coagulation. If possible, when these occur, the bath should be strained through a cheese cloth to remove the films.

(3). Latex should not be subjected to abnormal

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S. T. A. Meeting at Myrtle Beach

THE annual convention of the Southern Textile Association, held at the Ocean Forest Hotel, Myrtle Beach, S. C., on Friday and Saturday, June 29 and 30, proved to be a thoroughly profitable and enjoyable occasion for the large number of operating executives and representatives of allied trades, and their wives, who attended. The nature of the program was interesting, and not too "heavy" for the spirit of the occasion; the entertainment and exercise afforded by this attractive beach resort made the meeting especially enjoyable.

H. H. Iler, mechanical engineer, Union Bleachery, Greenville, S. C., presided as president, being assisted in the details by Harvey Hill, secretary, who is associate editor of the *Textile Bulletin*.

Culver Batson, manager and superintendent, Consolidated Textile Corp., Lynchburg, Va., was elected president, succeeding Mr. Iler. John A. McFalls, general manager, Morgan Mills, Laurel Hill, N. C.,

Left to Right: Culver Batson, the new president; H. H. Iler, retiring president; and John A. McFalls, the new vice-president . . . . . .

was elevated to the vice-presidency succeeding Mr. Batson; and Fred L. Still, superintendent, Victor plant, Victor-Monaghan Company, Greer, S. C., succeeds Mr. McFalls as chairman of the board of governors.

Hugh S. Clarke, superintendent, Waco, Texas, plant, Texas Textile Mills, Inc.; E. M. Holt, manager, Erwin Cotton Mill No. 3, Cooleemee, N. C.; Howard R. Hart, general superintendent, Aiken Mills, Langley, S. C.; and F. R. Lowe, assistant superintendent, Locke Cotton Mills Co., Concord, N. C., were named to the board of governors.

Marshall Dilling, secretary and superintendent, A. M. Smyre Mfg. Co., was re-elected as executive secretary of the association, and, on motion of Mr. Iler, the association voted to Mr. Dilling a Distinguished Service Medal for his unflagging and valuable work for the organization.

Luther H. Hodges, manager, Carolina Cotton & Woolen Mills Division, Marshall Field & Co., Spray, N. C., who spoke at the meeting, was, on motion of H. H. Willis, elected as an honorary member of the association.

At the first session of the convention on Friday morning, Mr. Iler made his address as president, making a suggestion that the work of the organization be augmented by the organization of local groups in various sections of the South, all feeding into the parent body.

Luther H. Hodges spoke clearly and convincingly on "Our Opportunities under NRA." He called upon the operating executives to address themselves seriously to these five points in their dealings with their employees: 1. A foreman must act straightforwardly with all his help and give them a square deal without favoritism. 2. He must respect them and their abilities and prove this by promoting from the ranks at all possible times. 3. His conduct and character must be above question and reproach. 4. He must be fair to the management and his help will better respect him for doing so. 5. He must know his job, keep studying and have someone prepared to take his place, keeping no secrets, but being open and frank, and encourage suggestions from subordinates."

Friday afternoon was devoted to recreation, this being organized into the annual golf tournament of the association, a horse-shoe pitching contest, and a pitching and putting contest for the ladies and a bridge tournament for the ladies. A great number of prizes in these contests were awarded, the presentations being made by Past-President T. W. Mullen at the banquet on Friday evening. The prizes for the different contests, with their winners, were as follows:

GOLF TOURNAMENT—MILL MEN: First low net, silver loving cup presented last year by the Charlotte Textile Club, F. R. Lowe, of Concord, net score 69. Second low net, Newton G. Hardie, superintendent, Inman Mills, Inman, S. C.

Low gross, first, W. J. Iselin, Woodside Cotton Mills Co., Greenville, S. C.; second low gross, F. Gordon Cobb, general manager, Springs Mills, Lancaster, S. C.

Low score on five picked holes (1 dozen balls presented by Wm. R. Noone & Co.), L. S. Cannon, assistant superintendent, Rosemary (N. C.) Mfg. Co. Consolation prizes, T. W. Mullen and Culver Batson.

GOLF TOURNAMENT—ASSOCIATE MEMBERS: First low net, silver loving cup, presented by Textile Bulletin, J. H. Zahn, H. W. Butterworth & Sons Co., Charlotte, net score 72. Second low net, Hughes L. Siever, Borne, Scrymser Co., Charlotte, score 73.

Low gross, first, Harry L. Dalton, southern manager, The Viscose Company, Charlotte; second low gross, Fred Sails, Atwood Machine Co., Charlotte, N. C.

LADIES' GOLF PITCHING AND PUTTING CONTEST: First prize, Mrs. J. H. Zahn, Charlotte; second prize, Mrs. Junius M. Smith, Charlotte; third prize, Mrs. I. E. Wynne, Charlotte.

LADIES' BRIDGE TOURNAMENT: First prize, Mrs. W. Earl Crenshaw; second prize, Mrs. J. D. Greene; third prize, Mrs. C. B. Suttle.

HORSESHOE PITCHING CONTEST: George B. Snow, Atlanta Brush Co., Atlanta; second prize, Ben Thomas, Textile Bulletin, Charlotte.

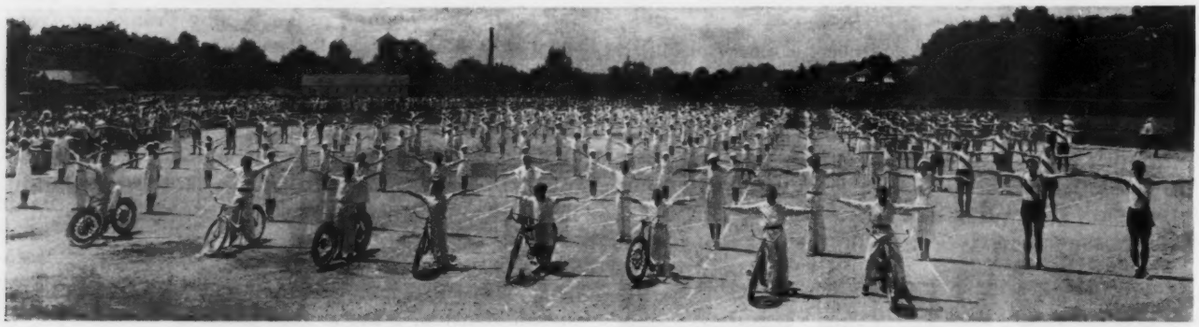
W. M. McLaurine, secretary-treasurer, American Cotton Manufacturers Association, of Charlotte, N. C., spoke at the banquet on the subject of "Scrambled Minds", making a plea for an open mind in connection with the New Deal. H. S. Reeves, of Charleston, followed Mr. McLaurine as a humorous dialect speaker.

Frederick M. Feiker, director of the survey of textile education for The Textile Foundation, was the speaker at the Saturday morning session which concluded the convention. Mr. Feiker discussed briefly some of the conditions and needs in textile education as developed in his survey and discussed in his report, "The Training of Men for the Textile Industry", which is available from The Textile Foun-

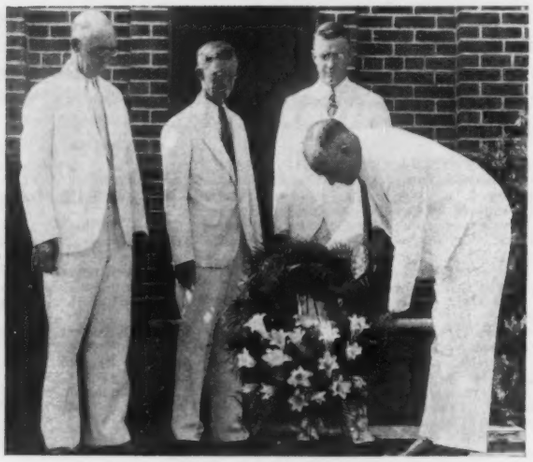
dation, Washington, D. C.

On Thursday evening, preceding the main convention of the association, the Associate Members' Division of the Southern Textile Association, composed of traveling salesmen, etc., calling on the mills, held its annual meeting. The occasion was a delightful affair, with Dr. D. W. Daniel, of Clemson College, S. C., as speaker. Emmet H. Steger, chairman, presided at the meeting, which was conducted in the form of a banquet, with many guests. I. E. Wynne, representative, Universal Winding Co., Charlotte, N. C., was elected chairman succeeding Mr. Steger, who is representative of Sherwin-Williams Co., with headquarters in Charlotte. William B. Uhler, of Borne Scrymser Co., with headquarters at Spartanburg, S. C., was made vice-chairman; and Junius M. Smith, business manager, *Textile Bulletin*, Charlotte, N. C., was re-elected as secretary.

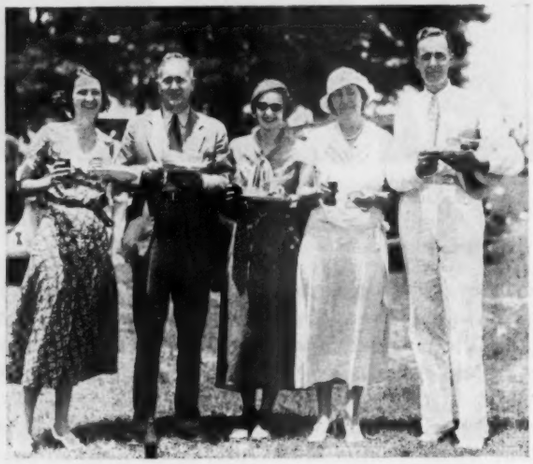
Callaway Mills Hold Annual Celebration of Founder's Birthday
Immense Barbecue, Field Meet, Etc., Feature Events at LaGrange



Pupils of Unity and Southwest LaGrange Schools in calisthentic drills



Overseer's club places wreath on Fuller E. Callaway Memorial Tower. Left to right: R. L. Farrar, H. M. Erwin, M. T. Johnson, J. M. Simpson . . . . . .



At the barbecue: Mrs. Cason J. Callaway, Cason J. Callaway, Mrs. Fuller E. Callaway, Jr., Mrs. Fuller E. Callaway, Sr., Fuller E. Callaway, Jr. . . . . .

THE sixth annual holiday and celebration in honor of the birthday of the late Fuller E. Callaway, Sr., was held by the Callaway Mills on Friday, July 13th. This date was selected since this year the birthday of Mr. Callaway, founder of the mills, July 15th, fell on Sunday.

Mr. Callaway passed away in 1928, and beginning in 1929, the mills began an annual holiday for all employees, with suitable exercises commemorating his birthday. In 1929, the beautiful Callaway Memorial Tower, conceived, planned and erected by overseers and employees, was dedicated, and suitable celebrations have been held each year since—with all the company's mills closed for the occasion.

This year the celebration took the form of an outing with field day exercises in Southwest LaGrange for the plants in LaGrange; and simultaneous exercises at the company's outlying plants in Hogansville, Manchester, and Milstead, Ga. At LaGrange, where a crowd of 10,000 employees and executives participated, the day was started by the placing of a wreath on the Callaway Memorial Tower by a committee of overseers. The morning was occupied by field meets, drills, etc., in the Callaway stadium. This was the first annual field meet between teams representing the several Callaway plants, and the Hillside team won and received a silver trophy. The shot put, 50-yard dash, 100-yard dash, 400-yard relay, 220 yard dash, hop-step-and jump, and broad jump were among the features of the field meet. There was also a drill by several hundred school children in costume.

Promptly at 12:00 o'clock, all of the celebrants and guests adjourned to specially erected barbecue stands, where 10,000 people were served in less than 20 minutes—a feat made possible by organization and planning on the part of Fuller E. Callaway, Jr., treasurer, his secretary, Arthur B. Edge, Jr., and others in charge of the event. There were 100 gates to the stands, and each guest had a numbered ticket, there being 100 tickets issued for each gate. There were 500 people serving and preparing the barbecue.

The afternoon was given over to a baseball game between teams from two of the Callaway units.

CURRENT TEXTILE TOPICS. . . .

Talk of the Month

Favorable Tangible Influences Struggle to Gain Upper Hand

SURROUNDED by the mid-summer madness of strikes, notably the San Francisco imbroglio, and within its own field, a "general" strike of some 13,000 employees in 20-odd mills in Northern Alabama, the cotton industry nevertheless began the second year under the NRA with at least a suggestion of heading the vanguard of progress toward the expected generally active fall business. The strength of raw cotton, as a result of the AAA program and nature's bullish hand, together with the approach of the time when the demand for finished fabrics should normally become active for the fall merchandising needs, contributed to bring the cloth trade out of its long lethargic movement. The cotton industry was among the first to realize a new tangible force at work after long inactivity.

From the record monthly consumption rate of May, June and July above 600,000 bales last year, the cotton industry slipped back below 400,000 in December, but hung above 500,000 through the first five months of 1934, then dropped below 400,000 again in June of this year. However, the June consumption of cotton was considerably above that of the same month two years ago and the figures for the cotton year ended July 31 are bound to show a good measure of progress out of depression. While July no doubt will be shown as another relatively small month, it is a healthy contrast to earlier months when consumption was running ahead of demand, a condition always destructive of demand.

Along with general business, the cotton industry started the second six months of 1934 in a sounder position than it was a year previous. As stated by the Standard Statistics Company at mid-July, "business generally has entered the second half of the year in a well balanced condition, with supply and demand in a closer adjustment than at any time since the start of the depression period. In contrast with the sharply expanding speculative activity at this time last year, business at present is marking time in normal seasonal fashion, awaiting the stimulus of the usual fall increase in demand."

For a long time business on all sides has been pointing hopefully, and confidently, to the fall. There have been many uncertainties, but a growing sentiment that an increasing freedom of action was to be vouchsafed to private business. Indeed, the success of the NRA and the AAA depends upon the success of private business. Thus has grown the belief that less experiment and more of a hands-off policy will be pursued by the Administration. The government NIRA program started on the basis of self-control by industry. The recovery program, with its vast expenditures, must be liquidated sometime through the profits of private business of corporations and individuals.

From the control-of-industry aspect, cotton manufacture was admittedly one of those branches which made the intervention of government an urgent necessity as a way out of the depression. But the cotton industry also has suffered from the confusion into which business broadly was thrown by the extravagantly comprehensive and experimental program reaching hither and yon. Confusion stifled normal speculation well in advance of a promising outlook. Fall prospects have been alluring, but the balanced position that of old would have started early action failed to do so because trade awaited relief from perplexity over extraneous factors.

Even in the face of strikes and the intangibles that caused hesitation, however, there were fundamental factors to give a measure of courage and confidence. In the cotton industry itself buyers faced a strong price outlook because of the forecast shrinkage in supply of raw material. The general agricultural situation was decidedly bullish because of the effect of drought, leaving a statistical outlook that will be reflected throughout business. Such key industries as steel and automobile manufacture were in an encouraging position the middle of July. The effects of the unbalanced surge of last summer have had time to wear away and, given a real forward impetus to the capital-goods industries, a well rounded advance is possible. It is certainly time for such a move.

Among the factors favorable to cotton goods, especially style fabrics, is their continued relative cheapness in the textile field. It is stated that converters are paying attention to the fact that cottons have been rising less than silks, rayons, etc., which counts heavily with consumers who want quality though facing higher cost of living without corresponding individual increase of income. Data of the Tubize Chatillon Corporation is significant of a relatively active position of cotton through the textile decline the first half of this year. They show that in consumption of the various fibers, cotton declined the least, followed in order by rayon, silk and wool.

As to the co-operative program of industry and government, it has long since begun to appear that in many respects there are problems of competition inherent under any arrangement. The labor uprising which reached its tentacles into cotton manufacture in a disturbing manner this summer was partly a reaction to experiment in government from which a great deal of turning back is manifestly becoming necessary. The processing tax remains a serious matter for adjustment. There are phases of wage regulations that must be modified. The NRA is on its second and final lap as an emergency measure. It must become practical in that time if it is to be continued as a permanent institution.

COTTON MILLS of New England were in a waiting position up to mid-summer, with inquiry the first part of July indicating a latent demand but actual buying postponed against the time when some concrete development should start the ball of trade rolling. Until the cotton situation assumed its bullish tone on crop prospects, buyers were feeling the market out for goods on the basis of the current low prices. When the strong tone of cotton stimulated sizable sales of gray cloths in the New York market around mid-July the inquiry in New England showed a corresponding tendency to improve, though no immediate readiness to bid higher prices was manifest.

New England Mill Situation

Spotty labor troubles and other matters incident to the NRA program occupied their share of attention in this mill section as the industry waited for the coming of active buying to put the emphasis upon production. Fall River was the center of a labor controversy involving one of the fundamental principles of the New Deal. Here arose another case, found in various industries, not of labor seeking fair treatment at the hands of employers but of one organized group fighting against another for domination: an independent union, the American Federation of Textile Operatives, against the United Textile Workers, an affiliate of the A. F. of L.

Manufacturers recognized the former as the dominant union in Fall River, but the heads of the U. T. W. proposed to force all textile workers of the city into their organization. These leaders insisted that a strike of their members in the Kerr Mill of the American Thread Company was not an attempt to force other workers to join their union, but the specious argument was made that they "are merely refusing to work with them unless they do join." Mill officials were quoted as saying that the U. T. W. move was an ingenious method of circumventing NRA code provision against forced union membership. Organizer Cottell said that the code gives the right to workers to join organizations of their own selection but he emphasized that "it has never been questioned that a union man has the right to refuse to work with employees not carrying a union card." The case was unsettled at this writing.

The suggestion early in July that the processing tax be increased brought a severe castigation of this levy in New England. The tax has been tolerated, but not accepted agreeably. On the suggestion of an increase the treasurer of the Charlton Mills and president of the Fall River Cotton Manufacturers' Association said: "We'll just shut up our mills. We cannot pass the cost along. The tax is so injurious to the cotton mills now that the result would be as I have said: the government would get no tax, for the mills would close."

Among mill changes, it is announced that the curtain division of the Pacific Mills, which operated in the Print Works Building for many years and which later was moved to a Malden plant, will be transferred back to Lawrence late this month or early in September. The new quarters for the division will be in the old Atlantic Mill. The move, it is added, will allow for expansion of operations on curtain manufacture. About 100 workers have been employed on such production.

The General Cotton Corporation of Fall River has purchased the No. 1 plant of the Davol Mills, to be used for storage purposes. The property has been stripped of machinery. Operations of the Davol Mills are being continued in the former No. 2 Tecumseh Mills, the property of which was absorbed by the Davol when it was liquidated some years ago.

In an interesting editorial, the Fall River *News Herald* points out that textiles profit that city more todty that in the halcyon period of a generation ago. Thirty years ago there were 41 cotton corporations operating 92 mills. The average weekly payroll was $229,000. Today there are not nearly so many mills, or number of workers, but added industries allied to cotton manufacturing have increased the payroll to $339,855. "The fact is called to attention in response to the talk of the gloomy deans that Fall River will never again be what it was in the good old days."

COMMENT ON THE COTTON MARKET

New Orleans, July 16, 1934.

DURING the past month, except for temporary slight recessions, the trend of the cotton market continued upward. Bullish developments were the rains in the central and eastern belts, apprehension as to possible damage by boll weevils, the big advance in the grain market, due to the drouth in the grain region, the continuance of the drouth in Texas, the urgent need of rain in Oklahoma, and the much smaller than generally expected recent cotton acreage estimate by the government. Compared with one month ago raw cotton values show a further rise of about $5.00 per bale, having made a new high today for thus far this season, which is the highest price level witnessed since the summer of 1930 when the depression was just beginning to be felt in the South. Today the country, especially the South and West, appears to be on the road to rapid recovery, especially if the present prices for grain and cotton hold, particularly if they move into much higher ground.

According to the government's recent initial acreage estimate, the area under cultivation on July 1 this year was 28,024,000 acres, a decrease of 31.4 per cent compared with the area—40,852,000 acres—under cultivation on July 1 last year. Last year, however, 10,495,000 acres were plowed up, and evidently 379,000 acres were abandoned, amounting in all to 10,874,000, which left an acreage for harvest of 29,978,000 acres. Therefore, the acreage planted this year is 1,954,000 acres less than the area harvested last year, which is the smallest since 1905. If the abandonment this year equals the ten-year average, which was 2.4 per cent, the acreage to be picked this year would be only 27,352,000 acrs, or 2,626,000 less than last year.

The following data concerning recent estimates as to the world's consumption of lint cotton, and the world's stocks on May 31, will likely be found of interest:

Lint— Bales—	This season	Last season
World's consumption of American in May	1,135,000	1,340,000
World's consumption of foreign in May	1,002,000	889,000
World's consumption of all kinds in May	2,137,000	2,229,000
World's consumption of American, 10 months	11,621,000	11,763,000
World's consumption of foreign, 10 months	9,658,000	8,563,000
World's consumption of all kinds, 10 months	21,279,000	20,326,000
World's stock of American, May 31st	12,734,000	14,229,000
World's stock of foreign, May 31st	6,938,000	6,165,000

BRITISH BOARD OF TRADE REPORT FOR JUNE

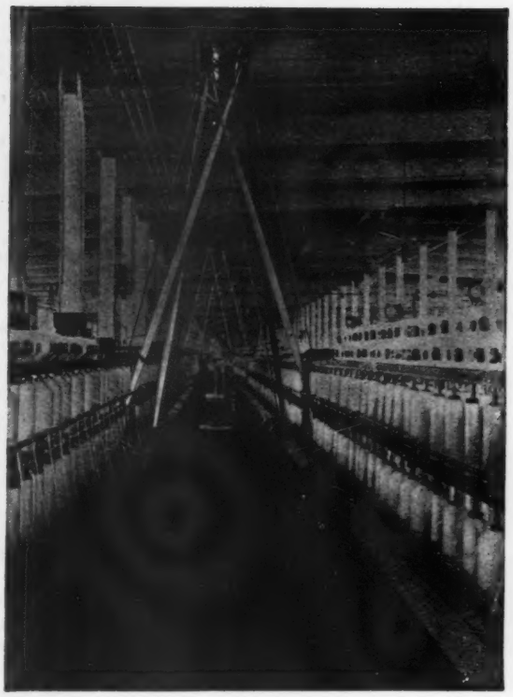
Year—	1934	1933	1932
Exports of cloth, yards	149,000,000	142,000,000	185,000,000
Exports of yarn, pounds	11,000,000	11,000,000	10,000,000

ONE WAY TO CUT COSTS!

Mill records prove Goodyear THOR Belt (Seamless*) reduces maintenance expense

●

Gives longer service on Cards, Frames, Slubbers, Spoolers, Looms, Slashers and Breakers



HIGHER labor and material costs put a greater premium than ever on economical operation.

And that is where Goodyear THOR Belt (Seamless) fits into your picture.

Built out of Goodyear's own practical experience in the cotton industry, this mill-proved belt reduces replacement expense on your fast hard drives to a minimum *because it is designed to stand the wear and tear of high speeds over small pulleys.*

It has no center seam to open under flexing strains! Its edges are envelope-protected against fray! Its body of heavy, close-woven silver duck, buttressed with toughest Goodyear rubber and skim-coated between plies, withstands heavy loads and holds fasteners!

JOB FITTED BY GTM

To insure maximum efficiency and longer service every THOR Belt is accurately specified to your particular set-up by the G. T. M. —Goodyear Technical Man.

Other mill-proved Goodyear products recommended by the G.T.M. for the textile industry are Emerald Cord V-Belts, COMPASS (Cord) Endless Belts and Goodyear Air Hose for clean-up work. To consult this helpful expert, write Goodyear, Akron, Ohio, or Los Angeles, California—or the nearest Goodyear Mechanical Rubber Goods Distributor.

Made in standard widths up to and including 18"-7 ply; special construction available in larger sizes

Goodyear is represented in the South by authorized Goodyear Mechanical Rubber Goods Distributors conveniently located with relation to your mills and able to supply promptly all Goodyear Mechanical Rubber Goods for the textile industry

THE GREATEST NAME IN RUBBER

GOODYEAR

NRA CODE

TEXTILE BELTING

MADE BY THE MAKERS OF GOODYEAR TIRES

CENSUS REPORT FOR JUNE

United States— Bales—	This season	Last season
Consumption of lint in Cotton Growing States, in June	292,621	565,951
In New England States, in May	59,962	113,139
In All Other States, in May	10,831	18,171
In the United States	363,414	697,261
Consumption of lint cotton in Cotton Growing States, 11 months	4,260,820	4,602,727
In New England States, 11 months	924,816	785,613
In All Other States, 11 months	155,079	148,414
In the United States, 11 months	5,340,715	5,536,754
Mill stocks, June 30th	1,326,480	1,398,448
Stocks in public storage and warehouses, June 30th	5,985,715	6,309,492
Stocks in mills, public storage and warehouses, June 30	7,312,195	7,707,940
Stocks in mills, public storage and warehouses, May 31st	7,992,092	8,715,355
Active spindles during June	24,690,312	25,549,974
Active spindles during May	25,891,366	24,609,908

While British Board of Trade returns for June, as to exports of cloth, were somewhat larger than for June last year, Census domestic consumption returns for the same month were decidedly unfavorable, which will likely be the case for July, the last month of the season, owing to the present schedule of curtailment. These developments, however, were more than offset by the continuance of the drouth in the western belt, which, together with the small acreage, have caused crop ideas to be reduced.

Progress of the Growing Crop

Washington's summary for week ended July 10—"Temperatures were abnormally high in the western cotton belt but mostly seasonable elsewhere. Moderate rains were rather general from the Mississippi Valley eastward, but the western belt experienced another extremely dry week. In Texas the weather continued unfavorable with temperatures abnormally high and showers too widely scattered to be of material benefit. Progress of cotton varies widely, ranging from deterioration in the drier sections to good advance in favored localities; in many places plants are small and blooming at the top. In Oklahoma rain is needed, but the development of cotton is still fair to good. In the central and eastern states of the belt progress was mostly fair to good, in some places excellent, except locally. Rain is needed in northern and western Arkansas, while in some east Gulf States showery, cloudy weather favored weevil activity. In Georgia, the general condition of plants remained rather poor with considerable complaint of grassy fields. Some improvement is reported from northwestern Louisiana."

TOTAL AVERAGE RAINFALL IN TEXAS, IN INCHES

Year—	1934	1933	Normal
November 1 to June 30	17.79	16.36	20.27
Of which in May and June combined	2.68	4.71	6.91

While the total average rainfall in Texas, November 1 to June 30, this year was somewhat heavier than for the corresponding period last year, there was a marked deficiency in rainfall in that state during May and June compared with last year, especially compared with normal, which largely accounts for the uneasiness over the present crop situation in that important state which has nearly 40 per cent of the belt's entire acreage this year.

The world's carry-over of American lint at the close of this season, on July 31, will likely be much larger than thought probable some months ago, perhaps around 10,500,000 bales, due largely to the twelve weeks 25 per cent curtailment in domestic mill production, which started June 4, and because of foreign spinners using more of foreign growths at the expense of American. So far, however, little attention appears to be given this matter at present, more consideration being concentrated on weather conditions in the Southwest and progress of the growing crop.

Pretty much the same action was in progress in the grain industry, due to the activities of the government, and especially because of the drouth in the grain regions. In other words nature has assisted thus far, so far as grain is concerned, in getting rid eventually of the burdensome surpluses, which may apply to cotton also in event of there being a short crop this year. A material reduction ultimately in the present burdensome supplies of cotton and grain would do much to improve the present economic condition of the tillers of the soil, which is the government's objective. Such a favorable development would probably stimulate commerce and industry, the better prices, if they hold, would increase the buying power of the farmer, which would be felt in the industrial North and East, and hasten the return of prosperity to the nation.

As to the future course of the market, which will likely depend on climatic conditions in the cotton region, especially in Texas. Generous well distributed rains in the western belt, if not delayed too long, would be of material benefit to the growing crop. Unless general copious rains visit the Southwest soon, the market is apt to maintain an upward trend, as local or scattered showers would hardly have much effect on sentiment or the market.

What the Southern Mills Are Doing

A new cotton warehouse in four sections, 50x100 feet each, is being erected by Bemis Bro. Bag Co., Bemiston, near Talladega, Ala. Batson-Cook Company, West Point, Ga., are the contractors on this work, which will cost approximately $21,000.

An extension is being made to the plant of the Thomaston Bleachery, Thomaston, Ga., which will be 96 feet west of the original building. Ben Hill Butts, Jr., has the contract. The addition will be used for Sanforizing equipment and storage purposes.

Tupelo Cotton Mills, Tupelo, Miss., have recently installed 12 new speeders, 60 Model E Draper looms, and 13 Saco-Lowell cards; and have re-roofed the mill and erected 25 new houses in the village.

Pepperell Mfg. Co., Opelika, Ala., have erected 25 new houses in the village. Batson-Cook Company, West Point, Ga., are the contractors.

Cannon Mills, Plant No. 4, Kannapolis, N. C.; Sellers Mfg. Co., Saxapahaw, N. C.; and Amazon Yarn Mills, Thomasville, N. C., are among the southern textile plants recently making installations of automatic stokers.

Pacific Mills, Columbia, S. C., are replacing several hundred old looms with new Model X Draper looms. Contract has been awarded for an addition to the Olympia plant of the company for an addition to cost approximately $11,500. C. M. Guest & Son, Anderson, S. C., are the contractors; Lockwood, Greene Engineers, Spartanburg, are the engineers.

Camperdown Mills, Greenville, S. C., have awarded contract to Fiske-Carter Construction Co., to build a power house building, 40x20 feet.

Pepperell Mfg. Co., Lindale, Ga., are rebuilding two boilers and installing automatic stokers.

Rocky Mount Mills, Rocky Mount, N. C., have spent during the past year approximately $125,000 in improvements, including installation of high speed winders, long draft spinning, and large package twisters. The entire village has been repainted and renovated.

Springs Cotton Mill, Chester, S. C., Baldwin plant, recently made changes in the electrical equipment permitting the plant to use power from the steam power plant of the Eureka Mill, owned by the same organization. The Eureka power plant will supply electric power for the three plants of the Springs Mills at Chester—the Eureka, Springstein and Baldwin.

Crown Hosiery Mills, High Point, N. C., are erecting a small addition.

Lake City Hosiery Mill, Marion, N. C., have installed 40 additional Banner knitting machines, increasing the production about 300 dozen pairs of hose daily.

The Old Fort Hosiery Mill, Old Fort, N. C., will be known as Monica Hosiery Mills, and it is understood that automatic H-H machines will be installed for manufacturing half-hose.

There's Cement ALREADY IN THESE COTS...

★ *They save you 10% on first cost of covered rolls*

THE new Armstrong's Seamless Cork Cots have the same operating efficiency and long-wearing qualities as before. In actual operation, they still reduce roller bills from 50% to 85%.

But the new ready-glued Armstrong Cot saves you an additional 10% on first cost, because Armstrong does four-fifths of the roll covering labor at the factory! With this new cot you simply dip the roll in water, slip the cot over it—and you're done. Inside the cot is a coating of tight-holding cement. When it's moistened, it binds securely *the full length of the roll!* And not a fraction of an inch of wall thickness is sacrificed for this new feature.

It's the same cot—the same thickness, the same choice cork, the same uniform quality of workmanship. And it's the same price. Send today for further information and prices. Armstrong Cork & Insulation Company, 923 Arch Street, Lancaster, Pa.

★ **DIRECT LABOR AND MATERIAL COST**
COVERING SOLID SPINNING ROLLS
Per M Rolls (2,000 cots, 1⅜" x 1 3/16" O. D. x 13/16" Hole)

	Former Method	Armstrong's Glued Cots
Cots, 2,000 @ $40.00 per M	$80.00	$80.00
Glue (240 rolls per pt.) per M Rolls @ $.32 pt.	1.33	
Total Direct Material Cost	$81.33	$80.00
Direct Labor Assembling 2000 cots		
40 Rolls per hr. @ 40c per hr.	$10.00	
200 Rolls per hr. @ 40c per hr.		$2.00
Total Direct Material and Labor Per M Rolls Ready for Buffing	$91.33	$82.00

Armstrong's Seamless Cork Cots

FOR SPINNING AND CARD ROOM ROLLS

New Textile Equipment and Publications . . .

New Wick Oiler for Bottom Steel Rolls

A new type of wick oiler for the bottom steel rolls has been developed and is being marketed by M. J. Stevens and W. C. Tapley, of Alexander City, Ala. It is shown in the accompanying sketches.

The oiler consists of a rectangle of steel, made in various sizes to fit different makes of frames. It sits on the roller stand in the position shown in Fig. 2. The oiler is ⅛-inch narrower than the stand and is of a length suitable to reach all three rolls. The rectangular steel box, as shown in Fig. 1, contains two wicks, *A*, which extend through slots in the bottom and contact the second and back rolls. The main body of the oiler is completely

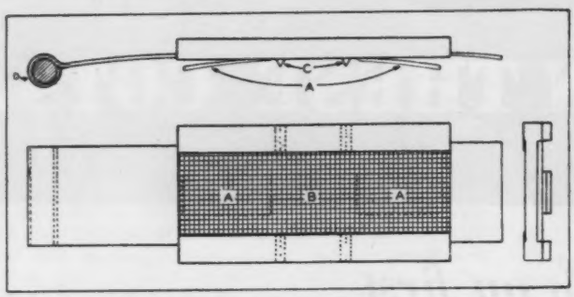


Fig. 1. The new wick oiler

filled with felt as indicated by the shaded portions of the drawing. The points *C*, of which there are four (two on each side) are to hold the weight of the oiler off of the wicks. For lubri-

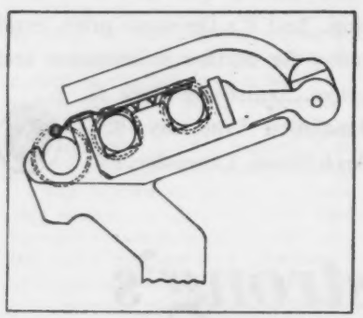


Fig. 2. The oiler in place

cating the front bottom roll, the wick is looped and stitched, as shown at point *D*, the resulting cavity being packed with felt, forming a roll, and this rests on the front roll and furnishes an abundant supply of oil to this roll. There is no pressure on the wick at any point.

A piece of copper screen wire is inserted, covering the entire top of the reservoir, as shown at *B*, to furnish protection from lint and other foreign matter.

The benefits of the oiler are rather obvious, it is pointed out by the manufacturers. It is necessary only to oil these wicks once every week, or even more infrequently, depending upon the type of oil used, etc. This, it is pointed out, represents a saving in oiling time. It is explained that there is never any excess oil on the necks of the rolls, thus preventing laps, oil on the top rolls, and other evils of this sort, thereby decreasing the number of ends down. It is claimed that tests have shown as high as 50 per cent of ends down are next to the stands, caused by oil on the rolls or by foreign matter on the rolls picked up by excess oil. It is pointed out that with this system of oiling the rolls next to the stands will be kept as clear of oil as the points between the stands. As the oiler covers the top of the stand, there is no place for foreign matter of any kind to enter the stand and damage the neck of the rolls.

It is furthermore pointed out that there are no periods after starting up when the rolls are running without oil; that every instant the rolls are turning they are being oiled, thus retarding wear; and when the rolls stop, the oil stops, eliminating waste of lubricant.

The manufacturers state that tests have shown that as long as two weeks after filling the reservoir of this oiler, the necks of the rolls have a good film of oil on them, and there is not enough oil on the shoulders to stain the fingers or be otherwise apparent. The leather on the top rolls were not stained by oil, it was stated, being the same color as the rest of the rolls.

New Manhattan V-Belt Engineering Data Book

Containing the latest list prices on Condor v-belts and over fifty pages of pertinent engineering information, the 1934 edition of the V-belt Engineering Data Book published by the Manhattan Rubber Mfg. Division of Raybestos-Manhattan, Inc., Passaic, N. J., is just off press. Reports from various v-belt users who have received advance copies agree that the data is not only valuable to the trade but is assembled in an attractive and convenient form, making it easy to use. Chapters on "Selecting a V-Belt Drive", "Design of Special ,-Belt Drives" and others are included in addition to numerous standard tables, charts and belt and sheave list prices. A copy of this timely book is available to interested persons by request direct to the company or to Cotton.

* * *

New Manual Tells How to Fabricate Stainless Clad Steel

The first comprehensive guide to the fabrication of stainless clad steel has just been issued by the Ingersoll Steel & Disc Co., 310 S. Michigan Ave., Chicago (division of Borg-Warner Corp.). This 16-page booklet is entitled "Manual of Welding and Fabricating Procedures for IngAclad Stainless Clad Steel" and takes up, step by step, the various methods of welding, soldering, lock seaming, riveting, deep drawing pickling, heat treating, etc., encountered in fabricating products of stainless clad steel. The manual contains many diagrams to guide the fabricator in working with the material.

A distinctive feature of the manual is an illustrated section showing actual installations and applications of IngAclad in a wide range of industries. Stainless clad steel has definite applications in the textile field for bleach and dye tanks, table tops, conveyors, etc., where resistance to corrosion must be maintained. Other sections of this booklet are devoted to a description of the method of producing IngAclad by the original welded-in-the-ingot process, the physical properties of the clad material, etc.

* * *

Handbook for Hosiery Dyers

E. F. Houghton & Co., 240 West Somerset St., Philadelphia, Pa., have just published a revised edition of "Houghton's Handbook for the Hosiery Dyer", prepared by the research staff of that company. The result of 69 years of experience in research and development of processing materials for the textile industries, together with a wealth of other data useful to the hosiery dyer, will be found in this book, the company points out.

COTTON
73
April, 1934
More than
1,000
deliveries sold
Including the following Mills:
ALICE MFG. COMPANY Easley, S. C.
AMOSKEAG MFG. COMPANY Manchester, N. H.
BIBB MFG. COMPANY Macon, Ga.
BOOTT MILLS Lowell, Mass.
DANA WARP MILLS Westbrook, Me.
COTTON MILLS CO. Durham, N. C.
MILLS CO., No. 2 Mill Erwin, N. C.
New Bedford, Mass.
Saco-Lowell Controlled Draft Drawing draws from laps instead of a number of individual ends of sliver.

Now more than 2,000!

100% increase within 3 months!

THERE can be no better endorsement of the remarkable performance of Controlled Draft Drawing than the fact that during the past three months we have actually sold more deliveries of this drawing than in the previous 18-month period; notwithstanding that during that period sales were extremely large, considering the radically different principles involved in this machine. This rapid acceptance by mills everywhere means but one thing—there now is a *better and more efficient system of drawing.*

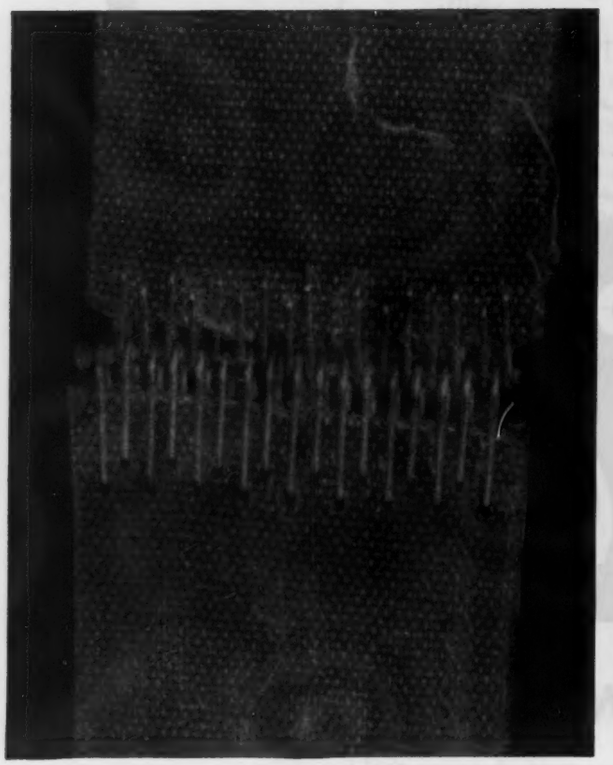
SACO-LOWELL SHOPS

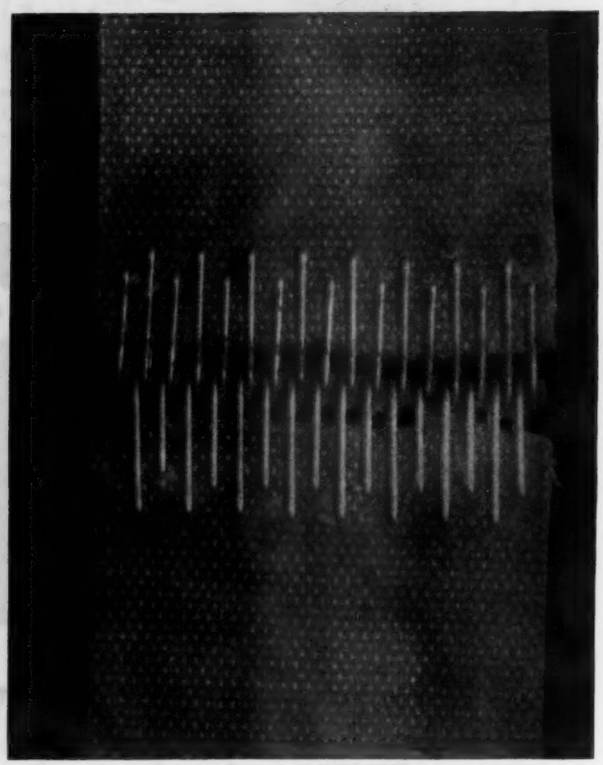
147 Milk Street, Boston, Mass.

CHARLOTTE, N. C. • ATLANTA, GA. • GREENVILLE, S. C.

S-L Controlled Draft Drawing

THE CAMERA PROVES Goodrich pre-conditioning





At the left above is a good belt gone wrong. It was not pre-conditioned for cotton mill service. So the minute it went on the fly frame drive, destructive tension set in and hooks soon began to pull out. Tension will never be even, and the belt will soon be gone.

Now look at the belt at the right. A strong clean joint, uniform tension assured, a belt good for years.

Original cost of both belts was the same. *Actual* cost of the belt at the left will be high, of the belt at the right trifling. That belt at the right is Highflex Jr.—specially designed by Goodrich for cotton mill service and pre-

Goodrich

THE CASE FOR . . . . .

GOODRICH MECHANICAL RUBBER GOODS FOR THE TEXTILE INDUSTRY INCLUDE:

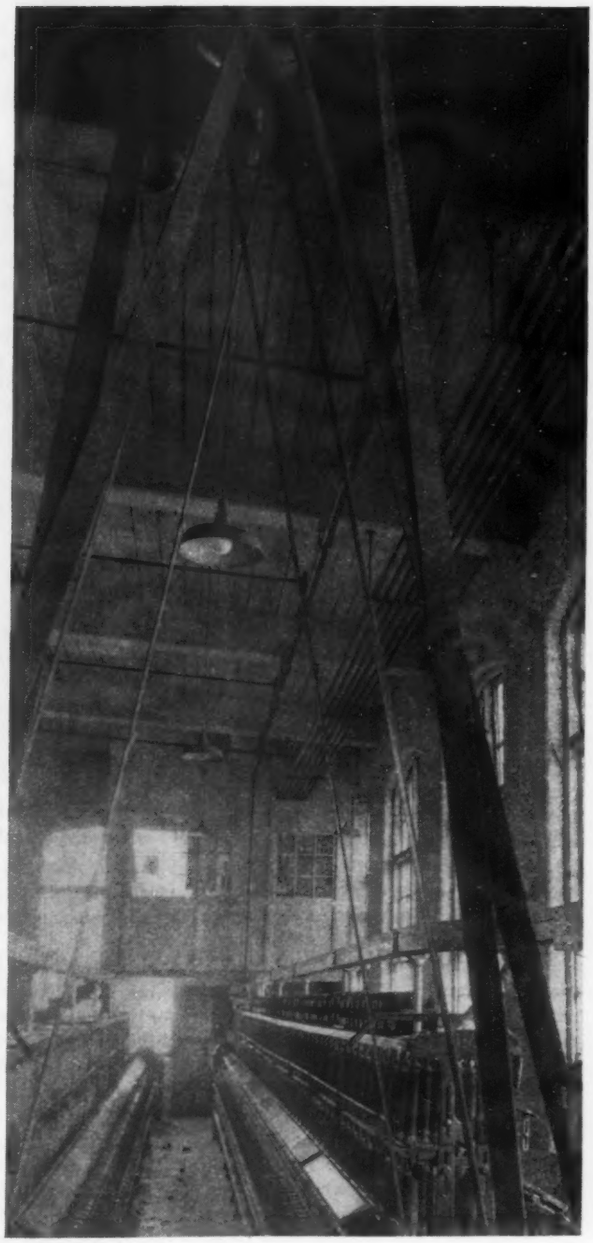
- *Transmission Belting*
- *Multiple V-Belts*
- *Conveyor Belting*
- *Air, Water, Suction, Steam and Fire Hose*
- *Roll Coverings*
- *Packing . . . and*
- *A Complete Line of Miscellaneous Rubber Items*

ALL *products problems* **IN RUBBER**

conditioned to fit the temperature and humidity of the mill and so prevent progressive and destructive tensions.

Because of Goodrich Pre-Conditioning you may now have all the economy and convenience of rubber belting with none of the disadvantages you may have had with other varieties. Highflex Jr. construction represents 14 Goodrich improvements in belt life. Together they offer you greater belt economy than you have ever had with any method of power transmission. Ask us to prove it.

The B. F. Goodrich Company, Mechanical Rubber Goods Division, Akron, Ohio.



● *Four frame motor drive. The belt driving from the exceptionally small motor pulley has been in service more than 4 years.*

Highflex Jr. Belting

"Camco" Differential Drive

The Centrif-Air Machine Company, Inc., Atlanta, Ga., manufacturers of the "Camco" automatic non-overflow mixing and cleaning distributor and "G. E." cotton control, have developed a differential drive for use in connection with their cotton feed control. The principle of the drive is that, with the control, it slows down the bale openers and reduces the delivery rate when the picker hoppers are filled, and speeds up the bale openers and increases the delivery rate when the pickers have used up the cotton in transit. This eliminates the former condition when, with a stop-start control, the flow of cotton from the bale openers is stopped, the cleaning machines run idle and handle no cotton; and when the flow is started, the cleaning machines handle too much cotton, it is explained. The manufacturers explain that when the amount of cotton delivered by the bale openers is reduced, the cleaning machines naturally do much better cleaning than they do under normal load; and they also do better cleaning when the delivery rate is increased.

The operation of the combined control and differential drive is described as follows:

Excess cotton passing the last picker hopper and carried under the feeler in the upper trough of the distributor operates a rotary switch which actuates a definite time relay, the cycle of which is adjusted for the time the pickers will require to use up the cotton in transit through the cleaning machines and trunk line at the moment all of the picker hoppers are filled and excess cotton operates the rotary switch. The definite time relay operates a magnetic reversing switch controlling a little pilot motor on the differential drive. When the rotary switch is operated by excess cotton, the relay and magnetic switch start the pilot motor driving the reversing screw which operates the belt shifter. When the belt is shifted across the loose pulley to the tight pulley on the opposite shaft, a mercury switch stops the pilot motor. The differential will then drive the bale opener countershaft at low speed until the definite time relay completes the cycle to which it has been set. The relay and magnetic switch will then shift the belt back to the normal or high-speed drive shaft, when a second mercury switch will stop the pilot motor. The differential will then drive the countershaft and the bale opener at normal or high speed until excess cotton again operates the rotary switch and repeats the first shifting process.

It is pointed out that this new drive prevents choke-ups in cleaning machines caused by failure of cage condensers at the end of the line to thread and deliver cotton when the flow is started through them after they have delivered all cotton in transit through the cleaning machines at the moment the stop-start control stops the flow of cotton from the bale openers. Where the differential drive is used, it is explained, there is always some cotton on the cage condenser screens and between the delivery rolls.

* * *

Paint Fluid Hose Resistant to All Solvents

A new type of paint fluid hose which, it is pointed out, successfully resists all commercial solvents, and has exceptional life, has been announced by the Electric Hose & Rubber Co., Wilmington, Del. The tube of "Electric" (DB type) paint fluid hose is made of a newly developed compound which, it is stated, possesses the strength and flexibility of rubber, but is free of any tendency to soften, slough off, break apart or disintegrate when in contact with oils or solvents. The special composition tube, it is stated, stays in place and maintains a firm grip on the coupling at all times, so that with it, couplings hold. The hose is of well-known braided and molded construction, light and flexible, with a cover to resist rough wear. It is made in ¼-, $\frac{5}{16}$-, ⅜-, $\frac{7}{16}$-, and ½-inch inside diameter, and is available in lengths up to 500 feet.

* * *

New Hemphill Attachments for Even Instep Knitting

In an endeavor to simplify the formerly difficult stitch cam adjustments on the auxiliary side of the split foot hosiery machine, Hemphill Company, Pawtucket, R. I., have announced three new devices to make it possible for the fixer to quickly adjust the machine to assure even knitting throughout the entire length of the stocking.

Micro-Control Auxiliary Stitch Cam Mounting. The construction of the auxiliary cam-plate slide bracket has been changed and this slide bracket has been pivoted at the top of the auxiliary sliding bar. Micro-screw control is provided so that it is very fast and simple for the fixer to even out the stitch on the auxiliary side throughout the instep and top of foot, it is explained.

Synchronized Tension Control. Tension control has been applied to all yarns that are knitted by reciprocating knitting. The company states that this tension has been applied to eliminate the lines in the reciprocating knitting throughout the instep and top of foot close to the suture seam which were sometimes caused by the yarn take-up having unequal tension as the position of the cylinder changed; with the new tension control device the drag on the yarn is always the same regardless of the position of the cylinder while reciprocating.

Automatic Auxiliary Sinker Cam Action. A new movable sinker cam has been applied to the split foot sinker cap on the auxiliary side. This gives the sinker a deeper thrust at the casting off position and evens out the reciprocating knitting stitch making the stitch throughout the instep and top of foot the same as the stitch in all other parts of the stocking.

The company states that the adjustments were developed for the machine at this time to enable mills to insure better quality split foot hosiery with a minimum of time required for stitch control adjustments.

* * *

New O-Type Knotter

The Mills Devices Company, Gastonia, N. C., manufacturers of Boyce weaver's knotters, have perfected and added to their line a new knotter, known as the O-Type. This knotter is of smaller construction than previous models, it is explained, and has the advantage that the tails of the knot tied by the O-Type are half the length of previous models in this line. This, it is explained, is of great benefit to weaving mills in warping, slashing and weaving. On knitting yarns, it is pointed out, the results are improved due to the fact that the yarn knits smoother. The company manufactures this knotter in a line to tie from 20s to 120s single yarn.

* * *

New Electric Static Eliminator for Warping

Sipp-Eastwood Corporation, Keen and Summer Sts., Paterson, N. J., have announced a new electric static eliminator for warpers which, it is pointed out, may be used with straight or over-end creel. The company states that this new static eliminator prevents spread of yarn from reed to creel; eliminates all flying of sections going on reel; gives accurate spacing of sections; does away with lapping of sections at any speed, and with stickers; eliminates the use of cords on rollers for holding sections; permits sections being closer on reel; prevents section marks in warps, and prevents "teasing" of warps to reduce section marks. It will stop at any speed without flying of yarn, it is pointed out; permits the use of paperless beams; and gives better warps on paper beams. With it, the company states it is possible to warp Celanese yarn 800 or more ends to a section at 320 yards per minute without flying of yarn.

To SAVE SPACE
REDUCE INSTALLATION COST
INCREASE SAFETY

use G-E Combination Magnetic Switches

A MAGNETIC STARTER AND A LINE SWITCH ALL UNDER ONE COVER

WHY waste space and increase costs by installing a line switch and a magnetic starter separately? G-E combination magnetic switches now combine these two devices in one compact unit. They're very easy to install — just mount near the motor, bring in the leads through the convenient conduit outlets, and the job is done. The combination is completely wired.

You will appreciate the safety of these switches. With circuit closed the cover cannot be opened. You will appreciate, too, the convenient test jacks which can be provided for quickly checking the motor current at any time. Send coupon for complete information.

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Schenectady, N. Y.

Please send me a copy of your handy data sheet on "Combination Magnetic Switches," GEA-1587A

NAME.....

COMPANY.....

ADDRESS.....

080-4

TIMELY NEWS ITEMS WITH A TEXTILE SLANT . . . .

G. S. McCarty Forms Company in Charlotte, N. C.

G. S. McCarty, for many years connected with the American Aniline & Extract Co., Philadelphia, Pa., has formed the Carolina Aniline & Extract Co., 122 South Boulevard, Charlotte, N. C., and has equipped a modern plant and laboratory for business in textile chemicals.

* * *

William Lee Establishes New Textile Service

William Lee, Box 785, Charlotte, N. C., who for many years was connected with the engineering departments of the former Woonsocket Machine & Press Co., and Fales & Jenks Machine Co., has established a new form of textile service, specializing in manipulation, determining mechanically the correct roll spacing and intermediate drafts most suitable to the staple and character of cotton being used, from the drawing frame to the spinning frame; also testing fly-frame processes for evenness, tension and twist of roving.

Mr. Lee received his technical training in the Manchester (England) School of Technology, and was for several years superintendent of a cotton mill in England prior to coming to the United States. He was for two years general superintendent of the Rex and Priscilla spinning mills in Gaston County.

* * *

Van Vlaanderen Appoints W. A. Kennedy, Inc., Southern Rep.

The Van Vlaanderen Machine Co., 370 Straight St., Paterson, N. J., one of the largest manufacturers of textile processing machinery, have appointed W. A. Kennedy, Inc., of Charlotte, N. C., to represent them in the southern textile territory.

* * *

Hygrometer Catalog

The Brown Instrument Company, Philadelphia, Pa., have just published a new catalog on Brown hygrometers for recording and controlling humidity. This catalog illustrates the latest models of the company's hygrometers and fully explains the various operating principles. Listed are the following Brown types: Hair hygrometer gives a direct reading of per cent relative humidity. The psychrometer or wet and dry bulb thermometer records humidity in terms of wet and dry bulb temperatures. The electrical resistance psychrometer embodies the advantages of the electrical resistance thermometer.

* * *

Dayton Names Spore as Southwestern Rep.

The Dayton Rubber Mfg. Co., Dayton, Ohio, have appointed Edward P. Spore as district representative in charge of distribution and sales of the company's line of v-belts and pulleys for all types of industrial service in the Southwest. Mr. Spore has long been associated with the power transmission field in the Southwest as representative of a leading transmission accessory manufacturer, and recently resigned his former connection to take over his new activities with Dayton.

* * *

Group Insurance for Textile Employees

Two textile firms recently have adopted group insurance for the protection of their employees, the Prudential Insurance Company of America announces. They are the Hartwell Mills, Plant No. 1, of Hartwell, Ga., and the D.S.D. Silk Company, of Allentown, Pa. Eighty-two employees of the Hartwell Mills are covered with insurance ranging in amounts from $1,000 to $2,000, according to rank, while 50 employees of the D.S.D. company are eligible to protection in amounts ranging from $1,000 to $2,500, according to rank. The first mentioned policy involves $86,000 and the latter $53,000, and both are of the contributory type, the employees sharing in the payment of the premiums with the employing company.

* * *

Mundet Agent

The McCormick Asbestos Co., Moreland Ave., Baltimore, Md., have been appointed agents for the Baltimore territory by the Mundet Cork Corp., 450 Seventh Ave., New York City, manufacturers of "Jointite" cork board for cold storage purposes and roof insulation, cork pipe covering, floor tile, isolation against machine vibration, etc.

* * *

Paget in Charge of Ventilator Sales

B. K. Paget has been put in charge of ventilator sales for The Swartwout Company, Cleveland, Ohio. He was formerly connected with John J. Nesbit, Inc., and L. J. Wing Mfg. Co., in heating and ventilating sales work.

Geo. B. Pfingst, Inc., Moves

George B. Pfingst, Inc., yarn dealers, have removed from 308 Chestnut St., Philadelphia, to Drexel Building, Fifth and Chestnut Streets, Philadelphia. The telephone numbers, Lombard 5576-5577, remain unchanged.

* * *

Sizing Ingredients That are Partly or Wholly Insoluble, and Those That are Soluble or Emulsifiable

A Paper Contributed to the Conference on The Warp Sizing of Cotton and Rayon, Held by U. S. Institute for Textile Research, Inc., May 11, 1934.

By H. C. Borghetty
Chief Chemist, The Aspinook Company, Jewett City, Conn.

This discussion is the result of investigation made during preparing, dyeing and finishing of artificial silk fabrics, and centers itself around the ingredients used in the gray goods mills for sizing. Although the past two or three years have witnessed a steady and increasing tendency on the part of the gray goods mills to standardize their process of sizing (or slashing) there are still a number of mills that continue to use sizing materials which are not always soluble during preparing of the goods for dyeing and finishing. Some cases (fortunately only a few) have revealed that the ingredients used are impossible to remove even with the addition of special solvents. The majority of the substances used may be classified as follows:

A. Ingredients which are soluble or emulsifiable during regular preparing of the goods.

B. Ingredients which are partly or completely insoluble in the regular preparing solution.

While goods which have been sized with materials of Class A give a satisfactory "prepare" if treated properly, those sized with sizing mixtures containing materials of Class B are liable to "prepare" irregularly and give dyeings that are either streaky or poorly penetrated, and in some cases not fast to crocking.

The following are sizing materials which have been found to be easily removable in a regular "prepare": Starches, converted starches (dextrine, gums, etc.); gelatin; sulphonated oils; glycerine; sulphonated alcohols and similar compounds; water-soluble dyestuffs which have no affinity for artificial silks.

Excepting starches, these substances are all soluble in water and can be eliminated readily. The starches must be digested (converted to the soluble sugar form) before they can be eliminated. The usual enzymes (e. g., diastafor) applied for two hours at 140 de-

grees F. will effect this change without any trouble.

Gelatin should not be used alone but must contain a sulphonated oil (e. g., sulphonated castor oil) in order to facilitate its elimination. When dealing with straight gelatin sizings it is best to treat the goods with cold water for as long a period as possible in order to allow the gelatin to swell freely and attain a colloidal condition which is very readily soluble.

A good standard "prepare" for the sizings mentioned, after giving the necessary treatment for starch or gelatin mixtures, is olive oil soap, 0.5 per cent solution, for 1 hour at 180 degrees F. In some cases addition of soda ash and pine oil are made. The water-soluble dyestuffs which have no affinity for artificial silks are used as "sightenings" and present no difficulty.

Among ingredients which are not readily soluble in the preparing liquor are the following: Waxes; linseed oil; mineral oils used without the addition of an emulsifying oil; dyestuffs having affinity for artificial silks.

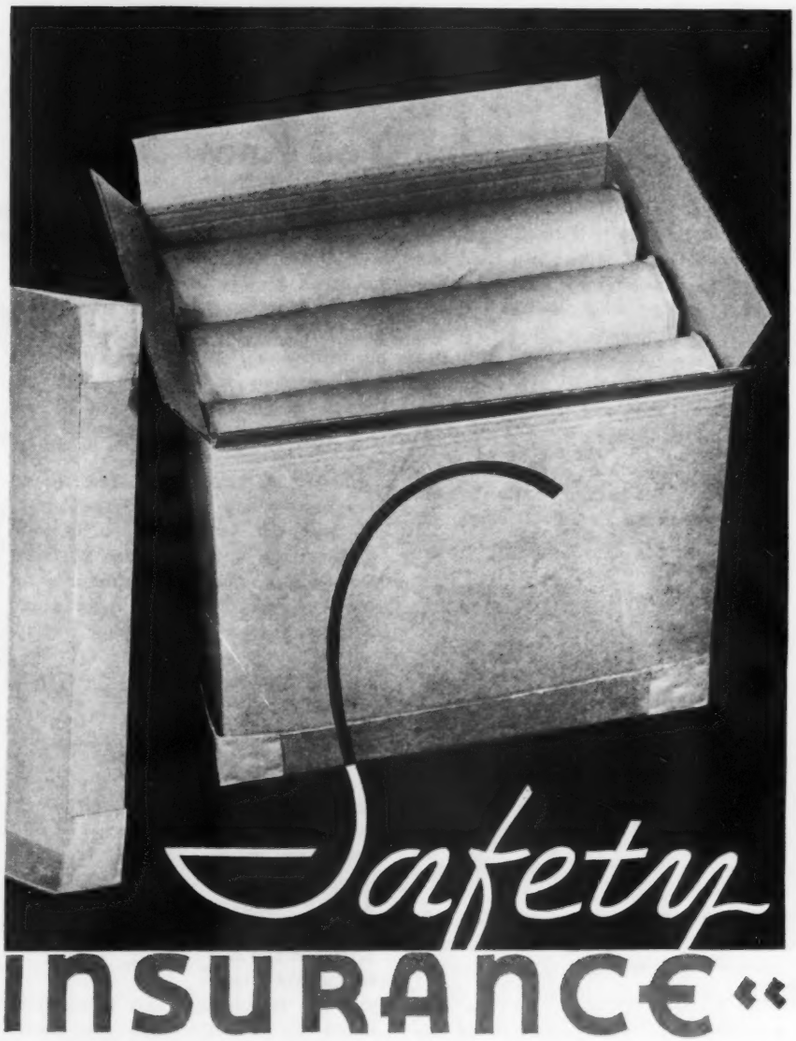
Waxes.—There are various types of waxes used as sizing ingredients and it is claimed that their addition favors weaving considerably. We do not, however, think they do, and, furthermore, even were this so, it would not be a sufficient reason to use them on account of the extreme difficulty of removing them.

Some waxes are sold as very fine colloidal solutions and they are, therefore, very soluble. There is always danger, however, in using those for it is possible that the emulsifying assistants used to render the wax colloidal have become modified and thus incapable of performing their function.

Linseed Oil.—Linseed oil is of no advantage in sizing but nevertheless it has been encountered at times. It has a marked tendency to oxidize and become partly insoluble.

Mineral Oils.—When mineral oils are incorporated with auxiliary emulsifying substances they can be used without great danger. It has been found, however, that sometimes the emulsifier has been either removed or modified after drying on the slasher and then the oil presents difficulty. We have found that the best method to use in order to remove mineral oil is to soak the goods first in soluble pine oil and then subject them to a thorough soaping.

Dyestuffs Having Affinity for Artificial Fibers.—Care should be taken that dyestuffs having affinity for artificial fibers are not used as a fugitive tint. Often it has been found necessary to use special bleaching agents, such as hydrosulfite, in order to remove these colors.



Modern SHIPPING BOXES COST NO MORE

When you pack your goods in Hinde & Dauch heavy duty textile boxes you are doing all that lies within your power to insure their safe arrival at their destination. Constructed of the very toughest kind of corrugated fibre board and strapped with steel, H & D boxes give utmost protection against ordinary transportation hazards. Products weighing up to 500 lbs. can be safely packed and shipped in individual Hinde & Dauch boxes. "Corrugated Boxes and How To Use Them" gives valuable shipping information you should have. Send for a free copy. Write—
THE HINDE & DAUCH PAPER CO.,
454 Decatur Street - Sandusky, Ohio

HINDE & DAUCH Engineered TEXTILE BOXES

LIGHT WEIGHT » DURABLE » DUST-PROOF

H & D FACTORIES ARE AT YOUR SERVICE IN
BOSTON, RICHMOND, BALTIMORE, PHILADELPHIA, NEW YORK, BUFFALO, CLEVELAND, SANDUSKY, SAINT LOUIS & KANSAS CITY IN CANADA, TORONTO & MONTREAL

PERSONAL NOTES
about Men You Know

E. L. SKIPPER, who has been general manager of the Fort Mill, S. C., plants of Springs Cotton Mills since 1927, has moved to Lancaster, S. C., to become general manager of the Lancaster plants. He succeeds F. GORDON COBB, who will assume administrative duties with the central office. Mr. Cobb has been general manager of the Lancaster plants since 1919.

WEBB DURHAM has resigned his position as southern representative for the Whitinsville (Mass.) Spinning Ring Company, to become associated with Winnsboro Mills, division of The U. S. Rubber Company in a technical capacity. This company operates mills at Winnsboro, S. C., Shelbyville, Tenn., and Hogansville, Ga. Mr. Durham was married to MISS NANCY FUNKHOUSER on August 3rd at Harrisonburg, Va. Mr. and Mrs. Durham are making residence in LaGrange, Ga.

Mr. Durham

W. PRESTON DUNSON, for the past several years superintendent of the Unity plant of Callaway Mills, LaGrange, Ga., was recently made superintendent of the company's Valway Rug Mills subsidiary, at LaGrange, succeeding E. D. ESTES, resigned. C. Y. HALL, JR., has been promoted from overseer of spinning and spooling to superintendent at the Unity plant succeeding MR. Dunson. O. C. SMITH has been made overseer of spinning and spooling at the Unity plant.

PERRIN N. COLLIER has been made general superintendent of the Callaway Mills, LaGrange plants, and the company's subsidiary, Truline, Inc., Roanoke, Ala. He has for several months been serving as assistant to FULLER E. CALLAWAY, JR., in connection with these plants. As previously reported, M. M. TROTTER, JR., is general superintendent of the Callaway Mills plants at Manchester, Hogansville, and Milstead, Ga.

H. L. GARRISON has been made master mechanic at Jefferson Mill No. 1, Jefferson, Ga.

H. H. ILER, mechanical engineer, Union Bleachery, Greenville, S. C., who has just retired as president of the Southern Textile Association, has been elected to full membership in the American Society of Mechanical Engineers, in recognition "of special attainment and capacity for service" in his profession. Mr. Iler was the first representative of the mechanical profession to be made president of the Southern Textile Association.

ERNEST M. (PLUTE) POTTER, for 20 years a resident of Charlotte, N. C., has been appointed sales engineer to represent the New Departure Mfg. Co., New Britain, Conn., manufacturers of New Departure ball bearings, in the southern territory. Mr. Potter will retain his headquarters at 913 First National Bank Building, Charlotte. Mr. Potter is well known in the textile field, and has made a long study of textile mill practices. After studying mechanical engineering at the Massachusetts Institute of Technology, and being associated for a while with the United Shoe Machinery Co., he located in the South in 1923, since which time his work has been exclusively in the South, 19 years as district manager of a ball bearing manufacturer and for the last two years with the U S Bobbin & Shuttle Co. He is a member of the Charlotte section of the American Society of Mechanical Engineers, of which he was for one term chairman.

Mr. Potter

W. R. TATTERSALL, who recently resigned as superintendent of the Eagle & Phenix Mills, Columbus, Ga., has opened a swimming pool on the Wilkinson Boulevard, near Charlotte, N. C. Mr. Tattersall at one time was general superintendent of the Chadwick-Hoskins Company of Charlotte.

E. J. WENTZ has resigned as superintendent of the Oneida Mfg. Co., Graham, N. C., and has returned to his former position as general overseer of No. 4 weave room, Riverside & Dan River Cotton Mills, Danville, Va., where he had been for ten years prior to going to Graham several months ago.

LAWRENCE S. HAMAKER, sales promotion manager of the Republic Steel Corporation, has been promoted to the post of vice president and general manager of the Berger Manufacturing Co., Canton, Ohio, a Republic subsidiary. Mr. Hamaker is a native of Canton, having begun his industrial career in 1919 in the sales department of the Berger company, transferring to the advertising department in 1923.

STANLEY A. KNISELY was appointed advertising and sales promotion manager of Republic Steel Corporation succeeding Mr. Hamaker. Mr. Knisely, a native of Canton, began as a newspaper man, later entering the industrial publicity field as advertising manager and assistant secretary of the National Paving Brick Manufacturers Association.

HUGH Y. BALLARD has become general superintendent of Rowan Mills, Salisbury, N. C. He was formerly assistant superintendent of the Climax Yarn Mills, Belmont, N. C.

J. C. BOYCE, overseer of weaving and assistant superintendent, Inman Mills, Inman, S. C., has become superintendent of Jackson Mill No. 1, Iva, S. C. T. E. STONE has been promoted to overseer of weaving at Inman succeeding Mr. Boyce.

W. B. HARRIS has become superintendent of Cartex Mills, Salisbury, N. C. He was formerly at Monroe Mills, Monroe, N. C., where he is succeeded by A. E. NANCE, formerly overseer of carding, Watts Mill, Laurens, S. C.

Obituary

CHARLES C. COZZENS, representative of the Steel Heddle Mfg. Co., makers of loom harness equipment, Philadelphia, Pa., and Greenville, S. C., passed away on June 18 at 70 years of age. He had been connected with the Steel Heddle Mfg. Co., for about 20 years, and had a host of friends and admirers among the owners and superintendents in the silk industry. He was originally from Paterson, N. J.

W. O. JONES, a member of the southern sales force of the Steel Heddle Mfg. Co., died at his Greenville, S. C., home on June 25 following a heart attack. Mr. Jones was the oldest salesman, in point of service, in the company's southern branch, and had acquired his practical experience in a career in which he progressed from operative to superintendent before joining the Steel Heddle organization.

LEWIS B. LAUGHLIN, superintendent of the China Grove Cotton Mills, China Grove, N. C., was killed recently in an automobile accident near Norlina, N. C. Mr. Laughlin was a graduate of the N. C. State Textile School.

THE MOST FLEXIBLE SYSTEM OF SPOOLING AND WARPING

•

BARBER-COLMAN AUTOMATIC SPOOLERS AND SUPER-SPEED WARPERS

•

THE AUTOMATIC SPOOLER

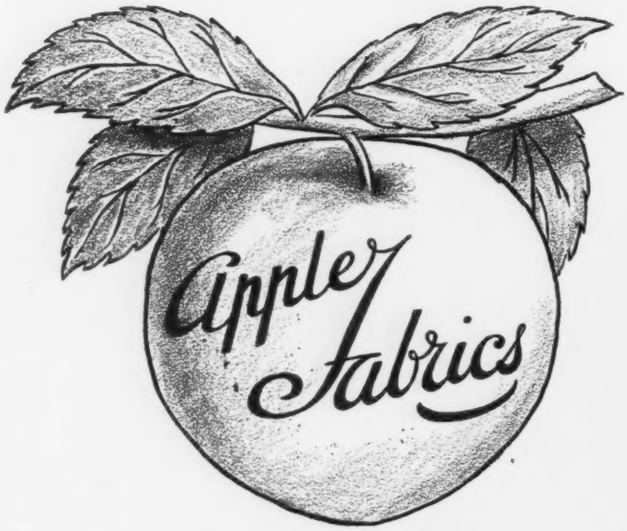
HANDLES AS HIGH AS FOUR YARN NUMBERS AT ONE TIME WITHOUT DANGER OF MIXING THE COUNTS

•

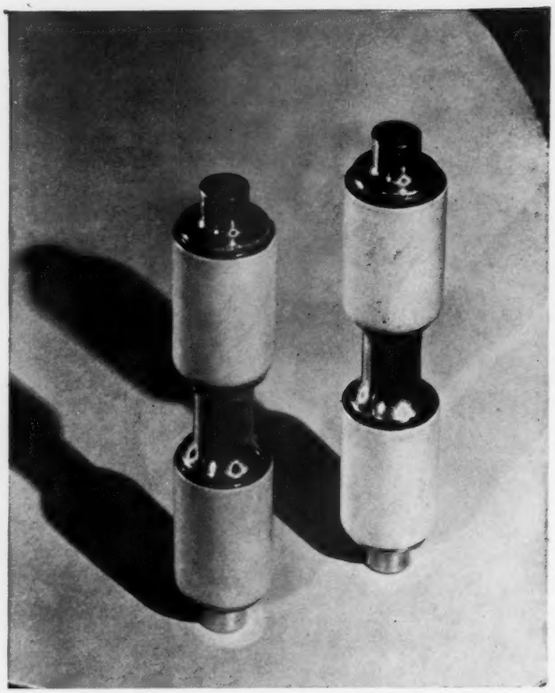
THE SUPER-SPEED WARPER

PERMITS CHANGES OF YARN OR NUMBER OF ENDS TO BE MADE ON EACH SUCCESSIVE BEAM WITHOUT LOSS OF TIME.

This Warper Handles Beams with Heads up to 30" in Diameter.



Mrs America knows these quality Cotton Flannels...



—even if she doesn't know
they are produced with SPINNA CALF

The Appleton Company, manufacturers of the celebrated Apple Fabrics . . . narrow and wide Bleached and Colored Flannels . . . were among the first of America's leading textile producers to recognize the definite economy and the added quality gained by using Spinna Calf roll coverings . . . results that have linked the name Spinna Calf with fine spinning and excellent fabrics.

A. C. LAWRENCE LEATHER CO.

Specialists in Textile Leathers

BOSTON, MASS. PEABODY, MASS. GREENVILLE, S. C.

AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

Are You Better Than He Is?

Have they told you about Mr. ———— who wants your job? Surely I do not have to tell you his name, do I?

Don't you think any more of your job than to let some fellow grab it and run, without your even knowing he is around? Surely you are not that dumb!

Don't know it!

What?

Do you expect me to believe that an intelligent man like you—a man holding the position you do—does not know that this very minute that there is a man looking out for your job? Wait a minute now—don't blame *him!* Blame yourself! You should be running that job so well that you feel perfectly confident that the boss can't find anyone else who can run it better. But to get back to the original thought—if you will only stop to think you will realize that there *is* a man who not only wants your job, but who is preparing himself for it; he is doing his level best to prove that he is a better man than you are, and don't you kid yourself into thinking that the boss doesn't know he is around. Don't you know where your best loom fixer is; don't you know where your best second hand is? Sure you do, and do you think your boss doesn't know where his best man is?

Well, what are you doing about it? Are you trying to improve your *knowledge?* Or are you just drifting along in a rut, thinking that because you have been on the job for years—and the boss seems friendly enough—that you are somewhat of a fixture?

I say, *Look Out!* You may have the surprise of your life coming to you.

Sometime ago if anyone had told you that all operatives would be working eight hours a day, with a minimum wage of $12.00 for a fellow who only rolls a box—

No, you would not have believed a word of it, but now, you see, don't you? So again, I say, Look Out. There may be some other things that will happen that you just *know* are not going to happen.

Sure, I heard you when you said: What in heck does OLD-TIMER want to talk about such unpleasant things for?

Simply to wake you up, brother. I'm afraid that you are getting just a little careless; just a little too confident; just a little lazy, maybe, and because I am interested in your welfare, and because you are interested enough in your own welfare to be reading this page—Confound it, don't you see that I just don't want to see you slip?

O. K.! you say—Fine! Come on now and let's get some new life; let's show the boss a few things he is not expecting, and see how much pleasure we will all get out of it, and, incidentally, leave that fellow who wants the job so dad blamed far behind that he will *never* have a chance to catch up.

* * *

Why "There's Always Room at the Top"

When the average man hears the admonition, "There is always room at the top", he says, "Oh yeah, I don't see any room at the top. Looks to me like all the good jobs are taken", etc. But fellows, did you realize that there is always somebody falling off of the top?

Yes, it is true that there is always room at the top because there are so darn many always falling off.

* * *

I saw a crew of engineers blazing their way through a wilderness looking for the best location for a road. They would come to a hill that went almost straight up; they would come to a ravine that looked impassable, but always, they continued to go forward, and I thought, how that work does compare with the work of an overseer or superintendent. Well, at least some overseers and superintendents, but not all. In fact, probably it really only compares to the work of a very few overseers and superintendents, because most of them want to wait until the other fellow has built the road so they can sail along smoothly. Now here lies the moral in this thought: Those fellows who are waiting for someone else to build the road are generally *waiting* the next time you hear of them.

* * *

"Beat the other fellow" is a darn good slogan, if you will remember it often enough and really try to do the constructive thinking that will bring it about.

I WISH WE COULD GET STEEL HEDDLES AS GOOD AS CHAFELESS CORD COTTON HARNESS!
WELL YOU CAN, MAN, DIDN'T YOU KNOW THOSE EMMONS PEOPLE MADE A CHAFELESS STEEL HEDDLE TOO?
SURE THEY DO! NOT ONLY A CHAFELESS STEEL BUT A LONGER LIFE MAIL EYE HARNESS, ADAPTED FOR THE DRAWING-IN MACHINE!

THERE'S A LOT OF SATISFACTION IN BEING ABLE TO GET STEEL HEDDLES, COTTON HARNESS AND MAIL-EYE HARNESS ALL FROM ONE SOURCE... EMMONS MAKES ALL THREE... YOU CAN GET JUST ABOUT EVERYTHING YOU NEED IN WEAVING EQUIPMENT FOR THE LOOM FROM EMMONS....

EMMONS Loom Harness Co.

ESTABLISHED 1867

LAWRENCE, MASSACHUSETTS...

GOODBYE

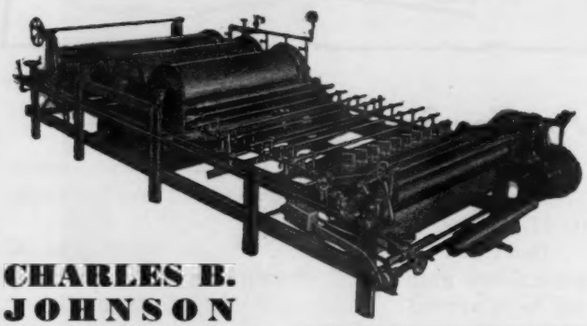
to cone pulleys and slip belts!

"We are glad to get rid of cone pulleys and slip belts," say mills which have recently installed new cotton system Johnson Sizers.

Our change gear box, which has eliminated cone pulleys, gives positive control of stretch. Tension is uniform throughout warp. This device permi s keeping a record of the tension so results for any type of warp can always be duplicated.

Slip belts are eliminated by the use of friction-disc loom-beam take-up drive . . . other features include patented single unit main drive with high, slow, and reverse speeds.

Write for descriptive folders.



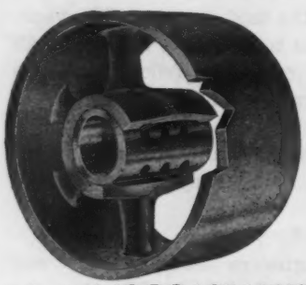
CHARLES B. JOHNSON

PIERCY AND HOLSMAN STS., PATERSON, N. J.

Representatives:
Joseph Barnes, New Bedford, Mass.
Carolina Specialty Co., Charlotte, N. C.

MOCCASIN BUSHINGS

STANDARD EQUIPMENT IN MANY TEXTILE MACHINES



Builders of world-known textile machinery have standardized on them for over 15 years.
We have made broad claims for the mechanical perfection of Moccasin Bushings and have yet to report our first failure.
They require the oiler's attention but a few times a year. They insure every drop of oil reaching the desired spot—the bearing. Nothing but clean oil can reach the bearing surfaces.
And finally—
Moccasin Bushings are *guaranteed* to give the fullest satisfaction in your most *troublesome bearings.*
We have an interesting booklet that gives sound reasons for standardizing on Moccasin Bushings.

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HOW OTHER MEN MANAGE

Practical Discussions by Cotton's Readers On all varieties of Mill Subjects

Points on Loom Fixing (Part 3), by Ivar Moberg

(This is the third in a practical series of articles on loom fixing which we know will be of value to many of our readers. The first installment appeared on page 87 of the June issue, Part 2 was published on page 71 of the July issue. In those installments, the subject of mis-picks, broken picks, double picks, filling kinks, kinky warps, etc., were discussed. We are particularly pleased that we have the opportunity of presenting these comments from a practical mill man. —THE EDITOR.)

WE invite our readers to make use of this department for the discussion of any and all problems arising in the mill or finishing plant. Questions, answers or letters need not conform to any particular style and will be properly edited before publishing. The editors do not hold themselves responsible for any statement of opinion or fact which may appear in this department unless so endorsed. This department is open to all.

◆ ◆

Creepers

The defect of creepers is similar to that of a kinky warp, but differs in that it is nearly always caused in the preparatory departments which have not paid due care to their work. Spooler and warper kinks are frequently the cause of this defect. When an end breaks in the beaming and cannot be found for piecing up, some slasher tenders simply lay the broken end loose on the warp and let it go at that. In the weaving, such a loose end will start to slip on the beam and form creepers in the cloth until it is loose enough to let the drop wires down to stop the loom. In many cases, the defect can run as much as a half a yard before the loom is stopped by the drop wires. The proper procedure in the case of a lost end is to break out an adjacent end and tie it together with the broken end. If this is done, the loom will run without making creepers until the knot reaches the drop wires, where it breaks clean and stops the loom.

Pull-Ins

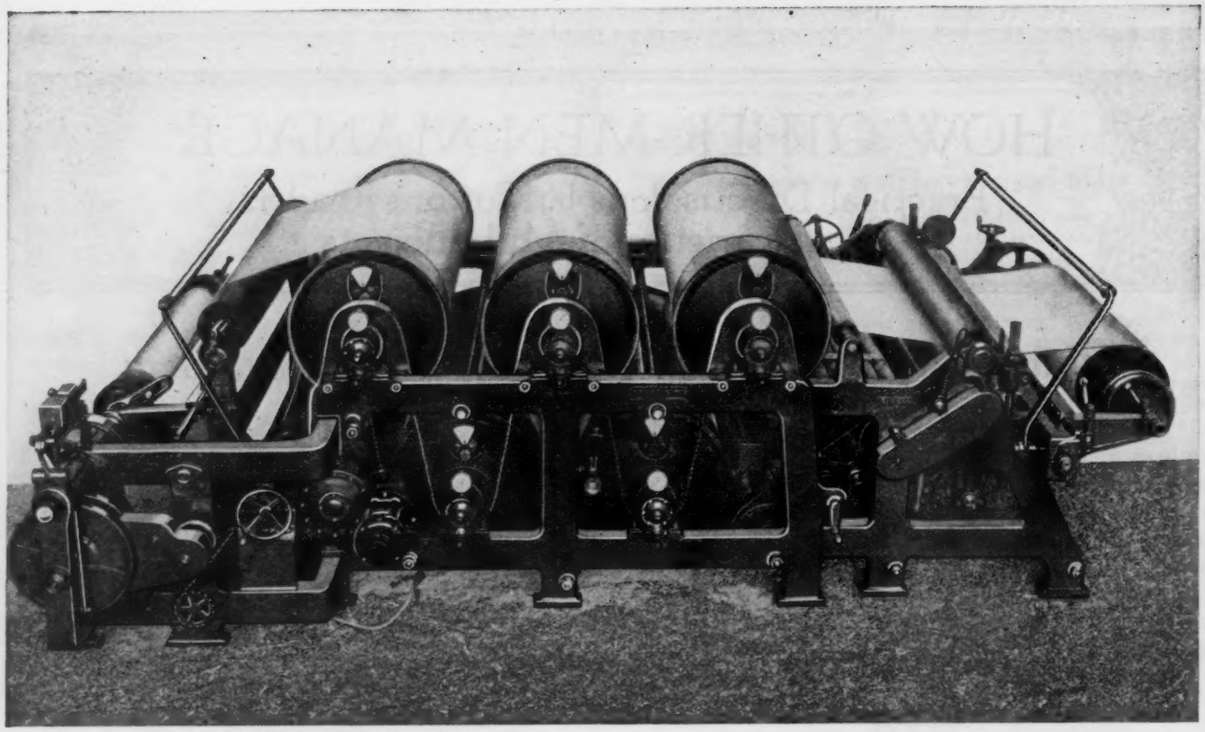
The defect of pull-ins is recognized by a part double pick and sometimes a triple pick in the same shed, and is caused by the temple cutter or shuttle feeler cutter not cutting the filling properly on the bobbin change. To remedy this, we first examine the defect, and if we find that there are three ends of filling protruding from the selvage and cut by the temple cutter, we know that it is the shuttle feeler cutter that has not functioned properly. Since we know that the object of the shuttle feeler cutter is to cut the filling from the outgoing bobbin and hold it until cut by the temple cutter a few picks later, it is obvious that the cutter either did not cut the filling at all, or it did cut it but failed to hold the cut end.

Before we attempt to fix the cutter, we make sure that it is at fault. To check this, we start the loom with a small bobbin in the shuttle and, as under the head of "Kinky Filling", we bend our knees until our eyes are level with the race board, and get them in synchronism with the speed of the loom and observe the filling. If the filling remains tight when the shuttle comes to rest in the box, we may be reasonably sure that the cutter is at fault. However, if the filling should slacken when the shuttle comes to rest in the box, we must first remedy this as it has a tendency to flip the filling either under or over the cutter.

After having adjusted the loom so that the filling remains tight while the loom is running, we see that the moving cutter parts are well oiled, and then test the cutter with a few bobbin changes. Many a time this is all that is necessary to make the cutter work properly.

If the cutter still misses, we turn the loom toward front center with the cutter in cutting position, and with a piece of filling test the cutter by hand to see that it cuts the filling and holds the end securely. If the cutter blades are dull, we replace them with new ones, or, if we know how, we can sharpen them on a fine grinding stone. If the cutter should cut the filling but fail to hold the end, it would indicate that the cutter is too loose or the pressure blade is too sharp, resulting in a double cut of the filling. If the pressure blade is sharp so that it will cut the filling instead of holding it, we take it out and smooth off the edges.

After we have assured ourselves that the cutter is cutting properly, we adjust its position so that it will barely clear the box plate. With the cutter in correct position, we adjust the bunter so that the filling will be completely cut just before the transfer of bobbins takes place. We also see to it that the cutter screw does not strike the box front; that the cutter operating spring holds the cutter firmly in cutting position; that the cutter will move into cutting position freely and without a snap which is often the case when the cutter is too tightly screwed up. We also check to see about the cutter moving



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into position too late due to incorrect timing of the filling motion cam, and also see that the cutter opens fully to allow the filling to enter its gap.

If the thread groove in the shuttle is too shallow through wearing down of the shuttle, the filling will be pinched between the shuttle and the box front, thus preventing the cut filling from being drawn out of the shuttle eye by the outgoing bobbin. On the next pick, the filling is drawn from the bobbin in the can into the cloth, and thus we have the pull-in.

With the old shuttle feeler cutter, we have to accept a certain number of pull-ins, even if the cutter is adjusted to perfection. However, there is available a new cutter, under the name of Stafford thread cutter, which is an ingenious little device that, if correctly adjusted, never misses. It is located underneath the battery and cuts the filling very close to the shuttle eye, so that the filling is cleanly pulled out of the shuttle eye by the outgoing bobbin. Whether we have the old shuttle feeler cutter or the new Stafford cutter, we must see to it that the cutter moves freely and is well lubricated.

It sometimes happens that the temple cutter is the cause of the pull-in. The pull-in, in this case, is caused by the failure of this cutter to cut the filling, and as the cloth moves ahead it will tighten the filling until it breaks or snaps out of the cutter on the shuttle feeler. It is then very likely to be drawn into the cloth. We can recognize this fault of the temple cutter by the stringy selvage that generally results. In looking over this cutter, we, as a rule, find that the cutter does not close properly, that the blades are broken, bent or dull, that the spring is too weak to push the cutter fully back, that the lint has collected in the cutter slide, or that the cutter is badly worn. We also see that the cutter is well lubricated, which is very important.

In trying to avoid pull-ins with the old type shuttle feeler cutter, we must keep the bobbins in the bobbin can low as this gives the outgoing bobbin a longer drop and possibly a better chance to pull the filling out of the shuttle eye. We must therefore empty the can frequently.

Skips

Perhaps one of the most frequently occurring defects are the skips. They are recognized by short irregular floats of either the warp or the filling on the fabric. Numerous causes are responsible for this defect, and before we attempt to fix the loom it is best to determine whether the skips are of the warp or filling float type. If the defect is caused by warp floats, the shuttle has picked up thread from the lower shed and this defect is often referred to as an under-shot. If the defect is of the filling float type we know that the shuttle picks over threads in the upper shed and the defect is therefore often referred to as an over-shot.

If the defect happens to be of the filling float type, we first see to it that we have a clear, open shed and that none of the harnesses are too low. Next we check the picker to see to it that it is not too low at its forward position. If the picker is too low, during the pick it will depress the rear end of the shuttle, causing it to be thrown upward which, if the shuttle does not fly out of the loom, has a tendency to cause over-shots. We must also make sure that the picker is not too high as this will cause the same defect. This might sound rather queer to many of us, but the reason for this is that we have a cut-out in the lay for the filling fork. If the picker is too high, the forward end of the shuttle, as it is picked from the box, will drop partly down in this cut-out and ricochet upward into the upper shed, causing over-shots or flying out of the shuttle.

The picker must always move parallel to the box plate and the point of the shuttle must enter in the center of the hole in the picker. Theoretically, the point of the shuttle should be a trifle below and toward the back of the center of the hole in the picker. This would press the forward end of the shuttle downward on the race board and rearward against the reed. However, with this setting of the picker the shuttle has a greater tendency to ricochet from any obstructions in its course, and it is rather difficult to maintain this setting of the picker as the hole in the picker will, after awhile, center itself over the point of the shuttle through wearing down. It is therefore more practical to set the picker from the beginning so that the hole will center over the point of the shuttle.

Next, we use a straight edge to check the box back in relation to the reed and the box plate in relation to the race board; in other words, check the lining up of the loom. It is obvious that these must be in a perfectly straight line. If the reed is a little in front of the box back, the shuttle at the pick will strike the reed and ricochet outwardly from the reed which, if not sufficient to throw the shuttle out, will have a tendency to cause over-shots.

Similar action will result if the race board is a little higher than the box plate.

We now use a small square to check the position of the box back and reed in relation to the box plate and the race board. This should show an angle of 90 degrees or a point less. American loom builders use a perfect angle while European loom builders recommend an angle of 88 degrees. As long as the angle is not over 90 degrees the loom will run well. However, if the angle is over 90 degrees, the shuttle will be forced to rise in the box and this is likely to cause skips or the flying out of the shuttle.

If the shuttle is worn convex on the back, if the picker is badly worn, or if the picker stick is worn, split or warped, the over-shot defect is likely to occur. Too strong, too weak, too early and too late a pick will also have a tendency to cause over-shots. We must also see that the take-up roll or breast beam and the drop wire banks and the whip roll are not so high that the top shed will have too much slackness.

If the skips are of the warp float type, or under-shots, we are fortunate in not having so many causes to look for. Under-shots can be caused by harnesses being too high so the shed will not come down on the race board, by too early, too late or too weak a pick.

In avoiding skips it is of course necessary to have the harness motion so timed that the shed is

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formed as the shuttle is picked from the box. It must, however, not be timed so early that the shed will close over the shuttle in its course through the shed.

If we place ourselves at the side of the loom with our eyes level with the race board and as close to the forward position of the lay as is safe, we can plainly see the shuttle's course through the shed when we get our eyes synchronized with the loom speed.

(This concludes the third installment of the current series on practical loom fixing by Mr. Moberg. The next installment will cover reediness, shuttle marks, etc.—The Editor.)

What's Wrong With This Card Room?

"Contributor No. 6123" reports what he found in a young man's card room. Let us have your answers to his questions . . . . . .

EDITOR COTTON:

It has been some time since I have brought up anything in our department that would provoke discussion, but I haven't lost hope; I have decided to try again. I would like to ask this time some questions in general pertaining to fly frames, hoping that there will be a few carders having experience and grace enough to give us some information.

I walked through a card room a short time ago with the overseer, and that room was a revelation to me. I found some new things. That carder was simply elated because he could run his fly frames in such a way that the ends were perfectly taut (tight) from the steel roll to the flyer.

To be sure that I wouldn't fail to see the condition, he said, "Just look how smooth and steady those ends are. They are not 'waving' or 'bouncing' about like you see on some fellows' jobs."

I told him that if there was any virtue in running the ends tight, that I thought he had it, and that they looked like the strings on a musical instrument. (I made the mental observation that I believed somebody could play "Home Sweet Home" on those ends —later I learned that the overseer had played the tune himself.)

I want to ask the question: What was wrong? I know the answer will be "tight ends", which is parrot-talk these days. But somebody tell me how that young fellow could have made those ends run slack; what would cause them to run tight; which department suffered most because of those tight ends?

Another thing I noticed about those frames was that the casing on the carriage and that which covered the spindle gears was wood casing and I noticed several bobbin gears jumping. This young fellow (the overseer) explained that with that casing it was impossible to oil the bobbin gears without removing the casing because the casing fitted too close to the bobbin gear (it being a single flange gear) and therefore he just oiled those bobbin gears when he oiled the bolsters (I suppose that he meant spindles) and if any of them jumped between times that the frame hand just poured on some more oil.

Does anybody know how to overcome a condition like that?

While gallivanting around with him, I asked this young man what staple cotton he ran and what his rolls were set from center to center. He told me he was running 1 1/16-inch cotton and that he set the front to second steel roll to 1 5/16-inch and that the stand holding the middle second and back roll was made in one piece, having a fixed setting of 1½-inch, and that there was no way to adjust these rolls.

Would you consider that setting proper for the length of staple given? If not, what would be better; also tell us what should be done about the "fixed" setting between the middle and back rolls?

I raised up the clearer cover and saw that the top rolls had a concaved space on each roller where it looked as if the roving traverse guide was not making its full stroke, or had been running in one place continuously. The overseer explained that his frames were equipped with an old type roving traverse guide that would only give a certain stroke with no alterations in the succeeding strokes and therefore he could do nothing about it. What could some of our carders have done to reduce this man's roll consumption of 625 rolls per month on 3,340 spindles?

Passing between the creels, I noticed several bobbins of intermediate roving pulling over the ends and pulling down around the bottom of the bobbins. I also noticed that he was having a lot of hard ends, that nearly 20 per cent of his porcelain cups (roving skewer steps) in the creels were cracked. Some were broken out and had ale bottle crowns tacked to the rail in place of the porcelain cups. The overseer complained that he had to put in a lot of twist to keep the roving from breaking back in the creel and that caused the pulling-over condition I have just mentioned. He did not mention those porcelain cups, so I passed that up. I do not believe that his excessive twist caused the pulling over of the roving in the creels, do you? Neither do I think the broken porcelain cups caused it, although the price of those cups is too small to have them in that condition.

Another thing that attracted my attention was that he had some speeders of 112 spindles, 160 spindles, and 192 spindles, and he was paying the same rate per hank on all frames, and the frame hands tended the same number of frames regardless of the number of spindles per frame. I wonder what that fellow could have done to have helped the situation. I asked him why he didn't reduce his spindle speed and have better running work. He said that it could not be done, he knew, because he had tried it, and furthermore those frames were built to run at the factory and that his job was to run them. Somebody tell me how he could have reduced the spindle r.p.m. What other changes would be necessary, other than changing the gears in the spindle train of gears?

Well, I suppose I have asked enough questions for one time, and that everyone will think I am just another "pin-headed, peanut-brained young upstart" trying to start something, but I'm not. At least I'm not trying to start anything except get somebody to thinking who will pass the results along to the "HOW OTHER MEN MANAGE" department.

CONTRIBUTOR NO. 6123.

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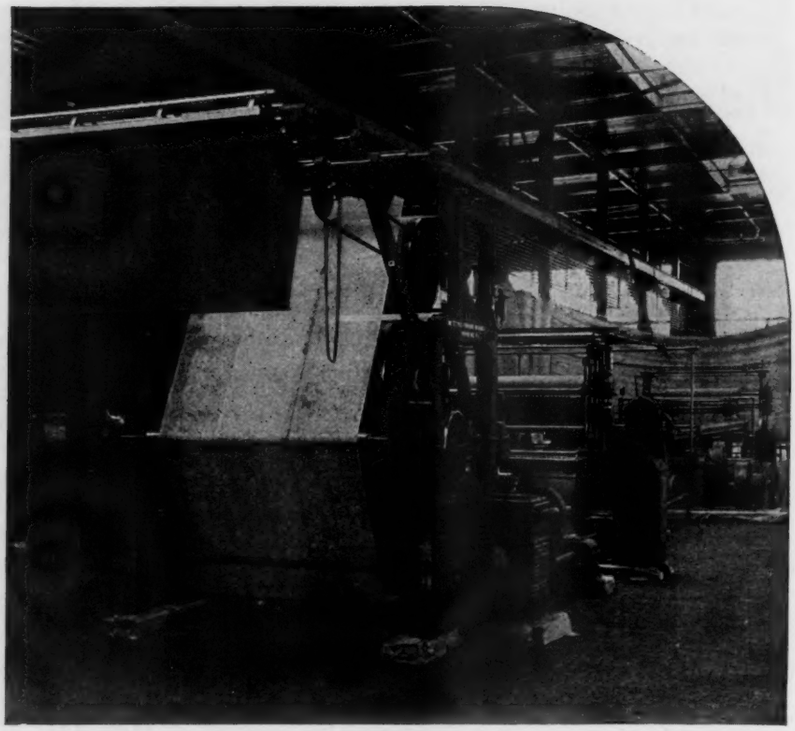

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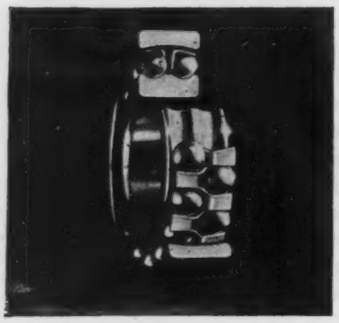

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Roller Settings on Fly Frames for Long Staple Cotton

ON PAGE 65 of the January 1934 issue of COTTON, "D. H. (N. C.)" asked for discussion as to the best feed plate setting, for breaking strength, under the following conditions: 12-ounce lap; 120 card draft; 40-grain card sliver; Strict Middling 1 3/32-inch and 1 5/32-inch cotton.

A copy of an answer from "CONTRIBUTOR No. 6296", subsequently published on page 82 of the March issue of COTTON, was sent to "D. H." who then asked this contributor for further discussion on roll settings for fly frames, which he had stressed as of particular importance in his article published in March. "D. H." offered the following conditions: Carded work with 1 3/32-inch stock; 40-grain card sliver; 63-grain drawing sliver (leather rolls—one process); .50-hank slubber roving; 1.00-hank first intermediate roving; 2.75-hank second intermediate roving; 7.40-hank jack roving; and 40s carded yarn. He gave his front roll speed on drawing as 225 r.p.m.; with size of frames, and twist multiple in each case as follows: Slubber, 12x6, .80 twist multiple; first intermediate, 10x5, 1.00 twist multiple; second intermediate, 8x4, 1.00 twist multiple; jack, 6x3½, 1.20 twist multiple. He stated the cotton is half local (Carolina) and half Western.

With this further information, "CONTRIBUTOR No. 6296" has now given the following suggested roll settings:

Roll Settings—All Settings Center to Center

Drawing	Slubbers
Front to second, 1 3/8"	Front to middle, 1 5/16"
Second to third, 1 7/16"	
Third to fourth, 1 9/16"	**2nd Intermediates**
1st Intermediates	Front to middle, 1 1/4"
Front to middle, 1 1/4"	Middle to back, 1 1/2"
Middle to back, 1 9/16"	Middle to back, 1 9/16"

Jacks
Front to middle, 1 7/32"
Middle to back, 1 1/2"

In connection with these roll settings, "CONTRIBUTOR No. 6296" makes the following comments: "The roll settings I am giving you are exactly what I would use with the lay-out given by "D. H." and I would like to know how they work out for him. He may find it necessary to open the drawing frame rolls 1/16-inch between centers of each roll on account of having leather top rolls, but with his low speed I hardly think this will be necessary. There is no fixed rule for setting rolls, in my opinion; you may say set a certain distance over the staple but that is merely something to work toward; it may not work and again it may be all right.

"A stock of 1 3/32-inch will have a good many fibers longer than that, and again, a good many shorter, so 1 3/32-inch merely means that the larger percentage of the fibers are 1 3/32-inch. That's why I think a better breaking strength is secured with a little wider roll setting, because advantage is taken of the longer fibers instead of breaking them—and this, I think, is one of the prime objects of the light unweighted middle roll in spinning. Of course a man could set the rolls too wide, but what I mean is as wide as possible without affecting the evenness of the roving.

"But I don't care how rolls are set; you can't even stock on fly frames that has been put through the pickers, cards or drawing uneven—neither will these processes correct irregular drafts."

"R. G.'s" Practical Ideas on Card Grinding

A prominent eastern carder discusses light versus heavy grinding, care of grinding equipment, etc.

EDITOR COTTON:

In going back over some of my issues of COTTON for the past few months, I find that there has been considerable discussion on card settings by different men, which is very interesting and also very constructive, but I do not recall seeing very much along the line of card grinding, in regard to heavy or light grinding and which is best; some men believe in heavy grinding and some think that light grinding is best.

I am going to take the liberty of discussing these points a little. I want to say right here that in my opinion too light grinding is almost as great an evil to good carding as is too heavy grinding, but there is that happy medium that a good card grinder is so accustomed to, but first of all, let us give our grinding apparatus a little attention.

It is very essential to good grinding that the traverse wheels and also the solid or dead rolls be in perfect condition, meaning by this that the long hollow shell of the traverse grinder is not worn or damaged in any way. If the outside of this shell is worn or the bore of the wheel is worn, they will not run true, causing uneven grinding. If the worm or the dog that runs in the worm is worn, it will cause the roll to travel with a jerky motion, which will result in uneven grinding. All traverse wheels and solid grinders should be perfectly balanced to insure a perfect grinding job. The emery fillet on traverse grinders should be renewed as soon as it shows the least sign of becoming smooth; also the fillet on solid grinders should be kept in good condition. When emery fillet begins to get smooth, it should be renewed if good grinding is expected.

I have worked with carders who insisted upon the card grinders washing out the emery fillet with turpentine about once a week, and this fillet would remain on these rolls for as long as two or three months. Now this is being penny wise and pound foolish, as emery that has run for that length of time must be smooth, and instead of putting a new carding point on it, it is simply polishing it up.

If new emery is examined under a powerful magnifying glass, it will be found that on each small particle are a number of projections resembling pin points. It is these points that give the card wire that carding point by scoring instead of polishing it. When these fine pin points are gone, the fillet is useless as far as grinding card wire is concerned and should be removed. Furthermore, if a card grinder has to use worn out emery on his cards, he cannot

Textile *Installation photo showing Monel Metal paddle type dyeing machines at the plant of The Chipman, Holton Knitting Co., Ltd., Hamilton, Ontario. These machines have been in use from one to twelve years and are used for dyeing woolen goods and have given entire satisfaction.*

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judge the depth of the grinding rolls, as these rolls are set by the hissing sound they make, and to obtain that sound with worn out emery, they will have to be set down much harder and there lies the danger of fusing the points of the card wire and also breaking the wire out of the foundation. I believe that when a pair of traverse grinders have ground about 20 cards they should be re-covered if good results are to be expected; the emery on the long solid rolls with which the top flats are ground will last much longer.

Now let us get back to the question of heavy or light grinding. As I have said in my beginning remarks, some men believe in heavy grinding while others believe in light grinding. Well, I think that one is just as bad as the other for these reasons:

As the traverse wheel travels back and forth over the cylinder and the doffer of the card, if set to the proper depth, it will push the card wire over first one way and then the other according to the way the wheel is traveling, and due to this deflection of the wire, while the grinder is passing over it, we get a point that is somewhat rounded, which gives us a better carding point with a greater carding surface than we would otherwise get without the deflection, as this would just grind a chisel point. This deflection should be between 8 and 10 degrees. If the grinding wheel is set to grind too heavy, this deflection will be greater, which will have a tendency to buckle if not to break the wire out of the foundation besides making barbs and hooks which are a great set back to good carding, as these hooks and barbs will surely make neps besides robbing the cotton fiber of its luster.

If on examining the card a fine white powdery deposit is seen on the coiler top near the trumpet, it is a very sure sign that the card wire has been hooked, and this fine white powder is the wax that has been scraped from the cotton fibers by these burred card points caused by too heavy grinding. Also these burrs will be apt to damage the fine cotton fiber to such an extent that the breaking strength of the finished yarn is liable to suffer. In my opinion the proper depth to set the grindings is to obtain a steady hissing sound without sparking.

If the grinding is not heavy enough, the points of the card wire will be ground to a smooth point or polished. Card wire ground in this way will give very poor carding results for the following reasons: First of all, the wire does not receive that side grinding effect due to the fact that the grinding wheel is not set heavy enough to deflect the wire from side to side as it is being ground, therefore giving the wire a smooth chisel-effect point. Also the points of the wire will be minus that fine scored effect, which is so necessary for clinging to the cotton fibers while they are being combed by the wire of the top flats.

Washing out emery fillet with turpentine makes emery look good to the naked eye, but it does not make it so that it will grind a carding point as I have described, so I think a little money spent on emery fillet will do more good than all the turpentine that can be purchased. R. G. (R. I.)

Answers to Carding Questions

EDITOR COTTON:

In a recent issue of COTTON there were three or four questions from "T. A. D. (GA.)", one of which was, "Do the traverse grinder rolls on cards sharpen or grind the points on the card clothing or does the clothing sharpen itself against the grinder rolls?

The question was answered in a rather slim manner by "WASH (R. I.)" in a later number of COTTON. However, I feel that our friend deserves a more complete reply to his question, hence I am endeavoring to give it to him.

It has very often occurred to me that the importance of proper grinding of card clothing, cylinders, doffers and flats, is not as thoroughly understood as it should be by those concerned.

The theory of grinding wire points is not universally understood, and a great many fail to understand the construction of the wire points and that which is necessary for proper carding.

I have often felt that a microscope which would enable the carders to see the detailed construction of the wire teeth of new clothing, as well as the points of wire on clothing which has been ground by improperly set rolls and has received bad treatment by the many other faultry applications possible, would be a big help.

It should be understood that the grinding of card clothing of any part of a card is a delicate operation, and should be treated as such, both for the sake of production of good sliver and the saving of a considerable expense incurred by haphazard treatment of the wire points in various ways.

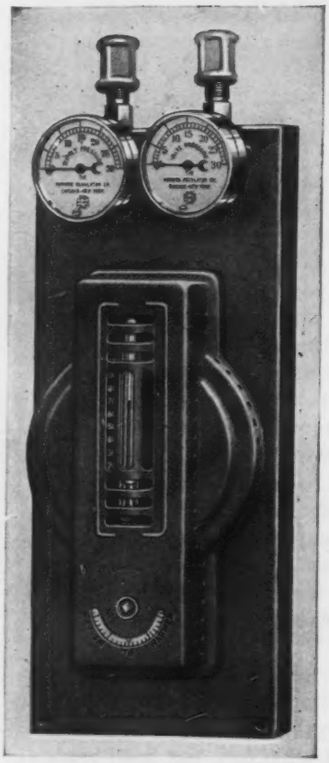
Of course "WASH" is right in mentioning the importance of speed in grinding cards. Speed, it might be stated, is almost everything. This question has been the cause of many discussions, but good results have been already obtained by running the cylinders at working speed and doffers in proportion to the latter. The speeds universally adopted are: for cylinders of 50-inch diameter, 160 to 170 revolutions per minute; doffers, 340 revolutions per minute; and the speed for grinding rolls should be from 550 to 750 revolutions per minute for 7-inch diameter rolls, and the speeds for other diameter rolls should be in the same proportion.

There are some instances where the doffer wire becomes smashed and has to be scraped up when it is advisable to run the doffer at a slow speed and the grinding roll as fast as possible. This is possible on cards having two speed motions, and I have found that with badly damaged doffer wire fillet this method proves very effective and restores quite a bit of life to the wire.

There are several points that should be carefully looked after before commencing the grinding of any part of the card. Care should be exercised in every phase of the operation, and the extinction of all slipshod methods and operatives of like caliber.

First, all crushed or deflected wire should be looked after and scraped up with the proper tool. If this is neglected, the wires are liable to be drawn up by the action of the wire of the stripping brush, which is of

POWERS
Room Temperature Control



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2 Helps to End Stops and Delays in starting looms, spinning frames, knitting & finishing machines

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If room temperatures in your mill are "controlled" by hand or by worn-out obsolete controls don't be surprised if you find temperature fluctuations of 5 to 15 F. above or below the proper point. By stabilizing room temperature in each department POWERS *automatic* control will immediately help you to gain the valuable advantages listed above. May we submit an estimate? There's no obligation.

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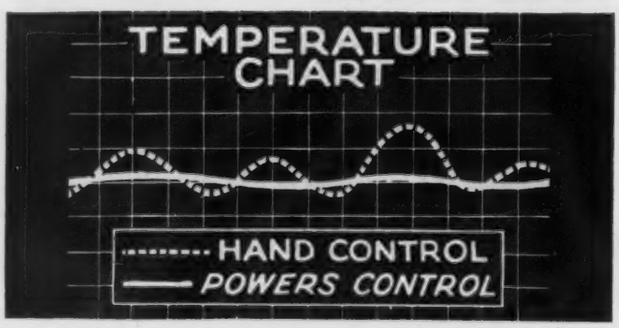
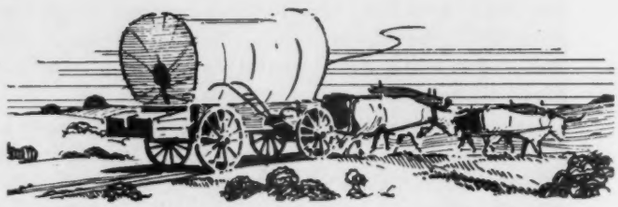
BIRMINGHAM, Homewood Stat., Box 27 READING, 1121 No. 11th St.



The Story of Cotton

This is the twelfth of a series of advertisements telling the story of cotton from its earliest cultivation in India and Peru to present times.



XII. WESTWARD HO!

When the War between the States was begun in 1860, Texas was already one of the leading cotton producing areas of the South. Production, however, was largely limited to the eastern and southern portions of the State. Today's rich cotton fields in Central and West Texas were Indian country, unfenced, untilled and dangerous.

The disbanding of the Armies after the war left young southerners foot-loose and restless. The plantation system of the Old South was destroyed, families were broken up; and many of the young men who had donned gray coats in the early sixties, left their homes in the last years of that decade and the first of the next to seek their fortunes in the new country of the West.

Settlement of the black lands of Texas was rapid, and the rich soil responded instantly to the plow. By the middle eighties the cotton crop from Central Texas was an important factor in world markets.

Farther west was Comanche country and only hardier spirits ventured there, first as buffalo hunters, then as cattlemen. Gradually the range was fenced; railroads were built; and large land-owners began to dispose of acreage to farming settlers. The country at first was thought too dry for successful cotton farming, but experiments proved the reverse to be the case.

Expansion, as new areas were developed, has been rapid. In 1879, the Texas acreage planted to cotton was only slightly in excess of 2,000,000; in 1900, it was beyond 7,000,000. It had climbed, by 1907, to better than 9,000,000; and in 1930, according to the census of that year, it was nearly 14,000,000. Today Texas produces, on an average, about a third of the cotton crop of the United States and slightly less than a fifth of the total world production.

King Cotton's western dominions are among the richest. The value of the crop accounts for practically half the agricultural income of agricultural Texas; thousands of Texas families are directly dependent upon cotton for cash revenue, and on the other sides of the world, other thousands in various manufacturing industries are equally dependent on the Texas crop. Within the limits of a century, Texas has been transformed from a wilderness into the largest cotton producing political division on the globe.

ANDERSON, CLAYTON & CO.

HOUSTON, ATLANTA, NEW ORLEANS, BOSTON, LOS ANGELES, CHARLOTTE, LITTLE ROCK, DALLAS, NEW YORK, MOBILE, MEMPHIS, SAVANNAH

greater length, and then there will probably be individual wire points which will rise above the whole wire surface. Any long individual wire discovered should be clipped off before grinding and any seeds which have become embedded in the foundation of the clothing should be removed, as these are somtimes so deep down as to render the stripping brush wire useless. This latter trouble is also likely to cause bent wire teeth and felting, which means the accumulation of matted fibers, hence depriving the wire of its carding or combing ability.

One other point I would like to emphasize is in regard to the matter of alignment. The grinding stands or steps should always be examined before setting the rolls on them. If these steps are not in true alignment, imperfect and oblique grinding will surely be the result. I have often wondered just how many grinders and carders trouble themselves with this important matter. The barrel or tube of the traverse grinding roll ought to be a good testing shaft if it is also true, but this should be ascertained before using it for a straight edge. We should not lose sight of the fact that grinding rolls are required to rectify conditions which undoubtedly demand the use of a truly balanced instrument, for such is a grinding roll when it is functioning correctly. It is easy to understand that if the wire of the cylinder, doffer, or flats requires a true surface, then the machine used to perform the operation must be true in every respect. Therefore, all worn shafts, rocking grinding discs, etc., should be thrown out.

The emery, of course, is an important factor, but not all important, and it surely is not a remedy for all of the troubles in connection with imperfect grinding. If the faults mentioned in the foregoing paragraph are tolerated, emery of any grade will be useless in producing a perfect carding surface on the particular wire points under treatment.

It should always be kept in mind that card grinding rolls are precision tools and should be treated as such. Putting up with faulty tools is false economy in every trade, and in our case will result in the production of bad work in the carding department as well as in subsequent processes.

Now in regard to grinding flats on cards, it is not generally known that it is impossible to get a thoroughly trued up surface by grinding them in the ordinary way. The only way to be sure that each and every flat corresponds exactly is by using the flat grinding machine and having the flats removed from the cards periodically for that purpose. Every six or twelve months, according to the work being done, the flats ought to be ground by the machine, which proves a very beneficial means of eliminating all high flats. This latter condition is always present after a certain amount of ordinary grinding.

One of the reasons for high flats is elongated flat chains, the wear of which is not always equal, hence we get flats being presented to the roll at a tangent and not parallel. Also, sometimes we find individual flats have wire of a different temper from that of others. A hard wire will resist the abrasion of the emery and a high flat will be the result.

Of course all carders must know that these high

STEAM SAVINGS ARE ALL PROFIT

That's Why So Many Mill Owners Use Morehead Return Systems

Morehead Back-to-Boiler Systems not only cut fuel and water bills by returning condensate direct to the boiler at higher temperatures, but increase the efficiency of steam heated equipment.

"The savings in steam, uniformity of temperature and control, and the continuous operation without stopping on our driers has been due to the Morehead installation, which has done all you claimed it would do. Condensate is returned to the boiler at about 300 degrees, making a very worth while savings in fuel and water."

So writes the Springfield Blanket Co., management.

"Our hosiery forms are kept free of condensation, and thereby uniformly carry the pressure of the steam at 20 pounds. This gives us an increase in drying efficiency of at least 20 per cent, as compared with the individual trap method. A saving of fuel has resulted that amounts to 800 pounds a day."

This is the record of Morehead equipment in Chipman-LaCrosse Hosiery Mills.

Whether you are operating driers, dry cans, slashers, hosiery forms, or other processing equipment, even though you may be satisfied with present performance, it will pay you to investigate Morehead methods. Mail the coupon today.

MOREHEAD MANUFACTURING CO.
Department C Detroit, Michigan

I'd like to know the experiences of Morehead users and to find out what Morehead methods will save me.

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MOREHEAD MANUFACTURING CO.
DEPARTMENT C DETROIT, MICHIGAN

The Proper Harness Equipment for the Weaving of Rayon

Rayon is one of the most difficult fabrics on which to obtain a satisfactory production, due to its extreme susceptibility to chafing. Extensive comparative tests have proven that the Flat Steel Rayon Heddles are the only ones that will give complete satisfactory results in the weaving of rayon.

It is the scientific design and meticulous care taken in their manufacture that has made them best suited for the weaving of rayon materials and the choice of the progressive rayon mills.

The Flat Steel Rayon Heddles have a super smooth, glass-like polish that cannot be matched by any other make heddle on the market today.

Their high degree of flexibility reduces to a minimum the friction of the warp ends in the heddle eye.

The frame naturally has a most important bearing on the quality of the cloth and lowers maintenance costs.

The Universal Ideal Frame, continuous slide, has been designed to overcome the trouble met in the manufacture of rayon and practically eliminates friction of rayon threads. It is strong and durable and is equipped with tempered steel heddle bars which allow smoother travel of the heddle and less wear on them.

For the most economical Harness Equipment designed and made specifically for the intimate needs and peculiarities of Rayon weaving, specify and use the product of

Steel Heddle Mfg Co.

Main Office and Plant
2100 W. Allegheny Avenue
Philadelphia, Pa.

Southern Plant
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New England Office
44 Franklin Street
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Huddersfield, England
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PROCTOR AIR-DRYER

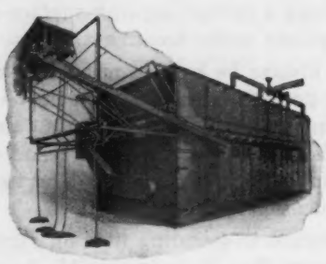
THE WAY TO PRODUCE BETTER WARPS

There is a wonderful improvement in the drying treatment of cotton warps with the new Proctor Air-Dryer compared with the old can-drying, as well as older air-drying methods.

No shaded colors . . . no hard spots . . . no overdrying and no flattened threads. Proctor Air-Dryers furnish natural drying conditions, resulting in superior loftiness, elasticity, strength and uniformity of color.

There are two Proctor Air-Drying Systems for cotton warps and both reflect the superior experience of Proctor Dryer engineers.

One, designed especially for mercerized warps, takes the warps in sheet form direct from the mercerizing machine and dries them in continuously rolling festoons still in sheet form . . . dries them uniformly and efficiently without tension, flattening or baking.



The other type applies alike to dyed, bleached, sized, or mercerized warps and is also a continuous system in which the warps travel over driven rollers through efficiently circulated air.

There is a type of Proctor dryer for practically every textile drying need. Why not let Proctor's experienced engineers figure on your drying requirements? Full details on request.

PROCTOR & SCHWARTZ, INC
PHILADELPHIA

flats are detrimental to good carding, because the presence of high, as well as low flats, means the loss of at least one third or one half of the carding capacity.

Some will probably ask why it is impossible to grind flats true on the card. Here is the answer: Let it be clearly understood that when grinding on the card flats is taking place the flats are in the reverse of that which they are in during carding. That is, they are grinding with the wire upwards while during the carding operation they have their wire pointing downwards. Hence the natural deflection of the flat itself is not corrected in grinding, but simply the reverse. If the reader will only study this point, my statement will become clearer.

It is now possible to give "T. A. D. (GA.)" a true conception of what happens when wire is being ground.

How is the necessary point, that is the chisel point, which is required for cotton carding obtained? The answer is by side deflection of the card teeth which are depressed by the emery surface of the roll. To get the correct deflection we need only to set the emery or grinding roll lightly, which will cause a deflection of the teeth sideways of about nine degrees. Hence it should be easily understood how we get the chisel point on the wire. It is by the side brushing action created by the lateral action of the grinding disc or roll, each side of the wire being alternately pushed

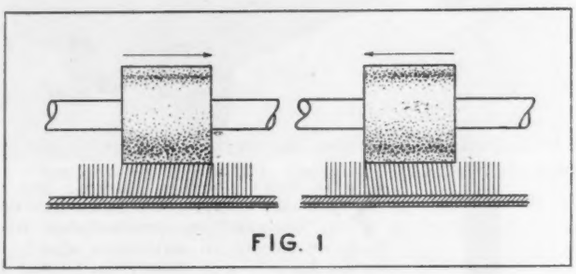


FIG. 1

over, as shown by the illustration, gently ground, after which the wire is allowed to regain its upright or normal position.

Of course the forward revolving action of the roll grinds from back to front of the wire which gives us a good clean point, that is as near as surface grinding will permit.

Often we find that there is a varied opinion among mill men in regard to the best grinding rolls to use. Some state that they prefer the traverse type grinder, while others prefer the long or dead roll.

I am partial to the traverse grinder because it gives a truer surface of card teeth, better points, and less is ground away in the attainment of results. It also requires less time to obtain a good carding point.

The chief objection to the long roll is that after use it is liable to be out of balance. Let us assume that we have a brand new roll from the factory, and that we have a "hollow" cylinder with high wire on either side which must be trued up. At first we have very uneven contact and very shortly after the roll has been in operation it will have lost that true surface and be full in the center and down at the ends. The point is the "hollow" cylinder will probably be remedied, but that long grinding roll will be used elsewhere. It should not be hard to figure out the result.

We can't truthfully say that it is "the best" mill white in the world—for the world is a big place.

However, it *is* fully the equal if not superior to the mill white claimed to be "the best" — and it costs you less.

Many of the largest mills in the South know this and get quality without paying a premium for it.

We will gladly send you full information, samples and prices. It will pay you to investigate

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Gilman Paint & Varnish Company

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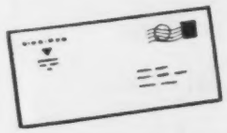
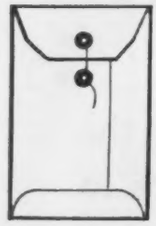
Paint and Varnish Makers for nearly a quarter of a century

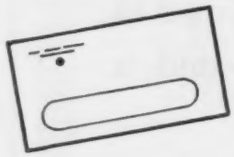
ENVELOPES
for Textile Mills



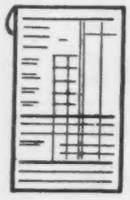
General Correspondence envelopes that are neat, attractive advertisements for your firm with tight-fitting seams and easy-sealing flaps.



Envelopes for catalogs, samples and other heavy mailings. Flaps gummed, with string tie or with metal clasp. Manila or kraft paper stock.



Window Envelopes with smooth, even windows that are extremely transparent. Universally used for statements and used by some companies for general correspondence.



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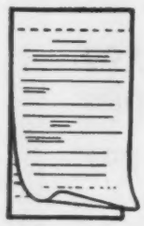

FOUR-IN-ONE PAY ENVELOPE. The patented pay envelope made only by Atlanta Envelope Company and sold to thousands of mills all over the nation. Completes four payroll operations with a single entry. Costs more but more than repays its extra cost by savings in the payroll department.

Send the Coupon for Samples and Prices

ATLANTA *Envelope* COMPANY

ATLANTA, GEORGIA

ATLANTA ENVELOPE COMPANY
505-7-9-11 Stewart Ave., S. W., Atlanta, Ga.

Please send me samples and quotations on the following envelopes. (Enclose sample of envelope you wish reproduced, if you prefer.)

Quantity _____ Type of Envelope _____

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SAVES

a tremendous loss of employees'
TIME . . . . .
at the same time retaining their
GOOD-WILL . .
and enabling them to revive their
ENERGY . . . .
without leaving their machines

YOU can't lengthen working hours, but you can save a tremendous loss of time by stopping employees from strolling back and forth to concession stands. You do not have to stop them from having drinks and sandwiches but you can retain their good-will and enable them to refresh themselves and revive lost energy with a WRIGHT Cold Drink and Food Cart working up and down the aisles of your mill. The employees will have their needs taken care of without moving from their machines.

The WRIGHT Cold Drink and Food Cart is a veritable cafeteria on wheels. It is scientifically designed, insulated, and ventilated, and can be handled with utmost ease even in narrow alleys. There are compartments for hot sandwiches, cold sandwiches, iced drinks, as well as an enclosed cabinet for tobaccos and gums. An occasional plugging in between trips will keep the electrically heated compartments at the proper temperature. Made in several sizes to meet any requirement. Let us tell you of its many valuable and attractive features. Write today, or see your local Coca-Cola Bottler.

WRIGHT CO., 84 LUCKIE ST., ATLANTA, GA.

WRIGHT
COLD DRINK AND FOOD CART

With the traverse grinders we are not troubled with the aforementioned evil. Uneven wear is not the result here because with the traverse grinder we have a disc about three to four inches wide sliding along a true steel tube, which grinds off the high spots as it comes in contact with them. The same emery touches every portion of the wire, hence we have a true line of teeth.

I must sign off now, hoping that my efforts will prove of some benefit to "T. A. D." and others. I would certainly like to see some further discussion of this very important, though neglected, subject.

D. E. (R. I.)

Card Drafts and Other Things

EDITOR COTTON:

So many good things have been said in your discussion department about card settings that it seems almost useless to pursue the subject further. And yet, out of all these splendid ideas and opinions we have had presented, there is still a question as to whether some valuable information lies hidden under the surface.

Each individual case has its own peculiarities and must be treated accordingly. A discussion of our experiences generates much thought and leads to many valuable points being brought out.

The mention of a goodly number of card settings, however, as used in the several individual cases, starts a series of experiments which if not properly conducted tend to result unfavorably. We cannot get away from the fact that a certain card room using cotton of a certain grade, staple and character, operating purposely to produce yarn of a certain count, twist, elasticity, and for cloth of a given weight, feel, face and strength, must find the settings required to produce these results, and adhere to the strict use of them. The fact that we use a list of settings in one case does not mean that these settings would answer in another. The fact of so wide a range of settings at our disposal eliminates any reason for the idea of standard settings and places us in a position of independence whereby we are able to arrive at a perfectly satisfactory result.

There are many more kinds of raw cotton presented to us in our every day experience, as carders, than many of us realize. A carder who examines and pulls every bale of cotton that goes through his mill keeps himself informed and is often able to make slight adjustments on his cards that prove beneficial. Variation in length, spirality, strength and elasticity of the cotton fiber means a necessary series of experiments on card settings for any given result. We must keep in mind that the card is built for making any or all adjustments required for its proper action on the stock, and the quality of work we get on a card comes from correct settings worked out in individual cases rather than copying a "standard" list.

A discussion of the many problems in which we participate offers a vast store of valuable information. But, if we study our own situation card by card we can very likely find ways to improve our cloth. We can

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"I used to say 'ship it'... Now I call

RAILWAY EXPRESS"

Experience speaking—experience who *knows* . . . knows all about the uncertainties and "buck-passing" of irresponsible shipping organizations—and of the aggravating delays and difficulties that threaten when shipments are "merely shipped".

Knows, too, all about the passenger train speed of Railway Express... the convenience of Railway Express door to door pick-up and delivery service... of the Railway Express receipt system at both ends... and of the responsibility and dependability of this nation-wide organization equipped with modern methods to tackle any shipping problem. Telephone your local Railway Express Agent for service or information.

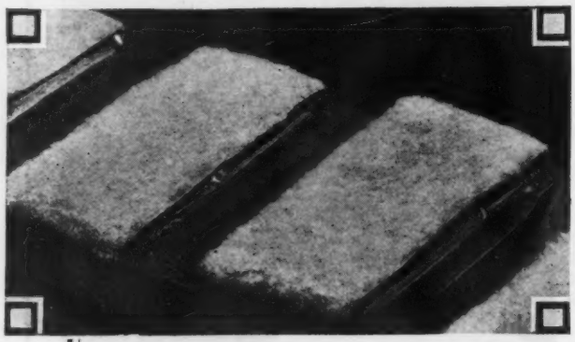
The best there is in transportation

SERVING THE NATION FOR 95 YEARS

RAILWAY EXPRESS AGENCY, Inc.

NATION-WIDE SERVICE

CLEARACOTS



OUTWEAR OTHER CLEARING MATERIALS

By

TWO TO THREE YEARS

CLEARACOT, the new roll-clearer of virgin wool, has a long life of efficiency. It lasts, because its wool fibres, firm in the skin in which they grew, cannot pull out. It lasts, too, because the fibres, having a natural springiness, do not mat down. They clear rolls just as effectively when old as when new.

This long, efficient life of CLEARACOTS means reduced production costs. If you are not among the many manufacturers who have proved this fact for themselves—

★ **Try CLEARACOTS at our expense. We will mail you free samples, if you will merely send us one of your clearers for size.** ★

A. C. LAWRENCE LEATHER CO.

Peabody, Mass. :: :: :: Greenville, So. Carolina

PHILADELPHIA

The Utmost in Felt

CLOTHS

ROLLER · CLEARER · SLASHER

THERE'S a big difference in felt cloths of various manufacture. Some do not have the correct cushion—some have a weak or loose nap that pulls out easily—some are too porous or not porous enough for textile use.

Many textile manufacturers who are particular about perfect and always uniform results from felt are standardizing on PHILADELPHIA Felt. They know they are getting the utmost in felt quality—felt that is made particularly for textile use—every inch rigidly inspected and always uniform.

Be sure of the highest quality and uniformity by specifying PHILADELPHIA for Felt Cloths, Stamping Blankets, Palmer Blankets, Sanforizing and Lapping Cloth for Printing, etc. Let our Southern Sales Manager, Mr. Clarence B. Seal, advise with you on your felt problems.

PHILADELPHIA FELT COMPANY

FRANKFORD, · PHILADELPHIA, PA.

employ a part of our time very profitably in studying the relationship between the card and the cloth and the knowledge thus gained will enable us to place in the hands of our selling agent a more desirable and a more salable piece of goods.

In view of the new conditions we shall find ourselves facing some problems which are going to call for our very best efforts. We will need to adjust ourselves to these new times and do a great deal of real serious thinking and plan for improvements on our cards to bring them up to higher and higher standards of production and efficiency.

Granting the present high carding standards in our mills, on which we may pride ourselves, we can scarcely hope to continue our long established practices, but we shall in all probability be expected to find new and better ways of doing things. Our jobs are going to demand more of our thought and along different lines and our ability to make our cards perform their duty in every sense, with lower supply and repair costs, less waste, less power—will mean perhaps more to our employers than we can realize. Our long years of experience and our technical training will be just as valuable as we make them.

Every day is going to bring new problems and they will have to be met and handled, no matter how difficult. Along with our mechanical problems will come new ideas in organization and management. Already we face a situation insofar as the human element is concerned that we probably never imagined before.

No suggestions are being offered here, however, with reference to that subject, as it must of course be handled locally. Each of us guiding the activities of his own "team" for it certainly is becoming a glowing opportunity to show real team work.

Mechanical science has given us a machine capable of far more work than many of us are probably willing to give it credit for, because our duties consist of more or less routine matters, and tend to detract our attention from our machines so that many great possibilities for higher accomplishment have been missed.

Certain principles govern the operation of a machine and when we master those principles whether by the hard knocks of experience or by the training school, we need have little fear of failure to hold our own with our competitors.

Systematic application of these principles in our everyday experiences will bring us to higher standards of accomplishment. Whether the present new conditions endure for a long or a short period makes no difference in our obligations to our mill and to our help, for the demand upon our executive talents will call for quicker and more decisive action to meet the rapid changes which doubtless many of us are even now beginning to anticipate. Consequently an increase in personal responsibility and the higher standard of overseership.

Finally, the entire situation is calling for results that only real ability can produce and will be governed by our practical experience and by technical education, working hand-in-hand in a whole hearted spirit of co-operation—all pulling in the same direction. Then we can hope for success to reward our efforts.

CONTRIBUTOR No. 4774.

This Mill Invested $1,075 and SAVED $3,750 the First Year

The New Type K Machine Strips from 100 to 120 Bobbins a Minute

The secretary and assistant treasurer of the Cherokee Spinning Company wrote, *"There is no question but that it is one of the most practical additions we have made to our equipment."*

He told how, by replacing the old Utsman machine with Type K, his mill saved, on labor alone—before the code—from $75 to $80 a week, which in 50 weeks amounts to $3,750.

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Let Terrell engineers make an estimate of the extra profit the new Type K Machine will earn for your mill. Let them show you the low cost of replacing slower, more-costly-to-operate units which, if Terrell machines, have trade-in-value. Type K Bobbin Strippers nearly always pay for themselves in a few months.

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More Card Room Questions from "Wash"

"A. T. G." and any others are invited to discuss these. Let's hear from some of you fellows who haven't written before . . . . . .

EDITOR COTTON:

At the termination of his article in the August 1933 issue of COTTON "A. T. G." stated, "However, if 'WASH'S' long experience has failed to take him through the weaving department, I would be more than pleased to answer card room problems that might seem difficult to him."

Just to please "A. T. G.", I would like to have him answer the following questions:

1. In the bobbin-lead system, the pressure of the paddles on the bobbin is nearly sufficient to keep the spindles up to speed after the frame as a whole has been put up to speed, even though at that minute the train of gears driving the spindles from the jack shaft were disengaged. This was tried by one of the largest shops building fly frames and it was demonstrated to be so. Is this an advantage or a disadvantage of the bobbin-lead system?

2. In the bobbin-lead system, why is a special cone belt required?

3. What is the proper speed for a doffer comb on a cotton card?

4. In sizing, why do we have a greater variation in the slubber strand than in the finished drawing strand?

5. The figured twist is never attained on fly frames. Why?

6. We run a fly frame to suit the intermediate speeds in order to keep the surface speed of the front roll and bobbin equal. What will destroy the intermediate speeds?

7. On all electric stop motion drawing frames, how close should the magneto be set to the hanging finger?

8. On a fly frame having 172 spindles, when the frame has run 840 yards or one hank, we have .20-pound on one spindle. What is the hank roving? This question is put just to see if "A. T. G." is up-to-date in finding the production of a card room.

9. Does an efficient card grinder have to have a keen hearing? Be careful when you answer this question.

10. What should be the proper speed of card grinding rolls?

11. With leather and cork rolls the bite on the fibers is in the center. Can the same be said of metallic rolls? Why?

12. Some carders employ what I term a trick in giving speeder tenders extra hanks without being caught at it. How is this done?

13. What type of flyer is best? Why?

14. Will the wrong setting of the twin gears on a fly frame that do not slip or come out of mesh cause running over and under?

15. When making a change from a certain hank roving to another, would you employ square-root to find the twist, lay or rack gear?

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16. Why is the strand of roving of a less diameter—or occupies less space—at the beginning of a set of roving than it does at the finish of a set? Is the bobbin-lead system to blame for such a condition?

17. What are the three chief causes of oil spots found in the roving and yarn?

WASH (R. I.)

The Use of Compounded Rubber Latex as a Textile Finishing Agent

(Continued from page 48)

conditions of temperature. Latex when frozen will coagulate when reliquefied, and consequently should never be stored in a spot where a low temperature of 32 degrees F. may occur.

Latex should not be heated as this will cause the stabilizing ammonia to volatilize; this condition tending to hasten coagulation.

(4). Latex mixtures should not be made in copper vessels, since if small amounts of copper are present in a rubber film, the metal will tend to hasten the oxidation of the film.

(5). Latex should never be added to size baths containing calcium, barium, or aluminum salts, as these exert a coagulation action on latex.

Rubber latex has found a place for itself in the finishing of certain textiles. It can be handled properly with the finishing equipment of the average mill. The prime requisite is that the finisher familiarize himself with this somewhat new finishing agent.

Problems Confronting the American Textile Exporter

(Continued from page 45)

the government handling the rebates are doing their best to give prompt action to the thousands of rebate claims piled up, and with the increased force, should have the rebate returns going on a current basis. Until recently, however, the rebate returns were months behind, and this handicap, especially for the smaller exporter, has been added to those of increasing costs and relentless Japanese competition.

Japan has been aiding her textile manufacturers to exploit the textile markets of the world, including those which previously looked to the United States as their source of supplies.

Perhaps the serious threat to our textile export business has not been fully realized, for so far we have failed to take the necessary steps which seemingly we might have taken to avoid this growing danger. Heretofore the textile industry has been capable of developing foreign markets against wide competition—and with full cooperation and sincere effort to eliminate handicaps promptly, it can always hold its own.

The export textile trade is a valuable part of our industrial structure. The future progress of the whole industry as well as the livelihood of the many employed in the export branch is at stake.—*From July 1934 issue, "Premier Rayon Review," published by Industrial Rayon Corporation.*

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The booklets or catalogs briefly mentioned below may be obtained by any readers of COTTON who will write to the Company issuing them or to COTTON, Grant Bldg., Atlanta, Ga.

10. Leathers, Textile—Booklet No. 101, 48 pages, illustrated. Showing "Bondaron" Check Straps—Lug Straps—Harness Straps—Pickers—Belting, both round and flat, etc. Horsepower tables and other interesting information. By Charles Bond Company, 617 Arch Street, Philadelphia, Pa.

11. Whitinsville Rings—16 page illustrated booklet, describing ring manufacture, measurements, types, uses. How to determine flange sizes. By Whitinsville Spinning Ring Co., Whitinsville, Mass.

15. The Powers System of Thermostatic Control—"Slasher room is Bottle-Neck of Textile Mill." 18 page illustrated booklet showing importance of proper treatment of cloth in slasher room and advantages of Thermostat over hand control. Also room temperature control illustrations. Issued by Powers Regulator Co., 2739 Greenview Ave., Chicago, Ill.

21. Warp Sizing and Composition of Cotton—Folder containing reprints of articles carried by textile publications of interest to progressive mill superintendents. By Seydel-Wooley Co., 748 Rice St., Atlanta, Ga.

23. Practice of Rayon Sizing in American Mills, Raygomm, Lakoe Gum—Three booklets on products for sizing and finishing rayon and other textiles, presented by Stein, Hall & Co., Inc., 285 Madison Ave., New York, N. Y.

25. "Lupogum" and "Monopole Oil"—Two booklets on textile sizing and finishing products. Jacques Wolf & Company, Passaic, N. J.

28. Akron Belting—Practical Rules and general information for users of belting with belting catalog. By Akron Belting Co., Akron, Ohio.

29. Continuous Card Stripper—A 20 page booklet describing in detail continuous card strippers, their advantages, the power required to operate, etc. Saco-Lowell Shops, 147 Milk St., Boston, Mass.

30. Lubrication of Textile Machinery—32 pages, illustrated. Data covering the economical lubrication of all textile machines. New York & New Jersey Lubricant Co., 292 Madison Ave., New York, N. Y.

38. Sleaziness in Full Fashioned Knitting—Illustrated survey with samples of fabric showing causes of sleaziness and methods to be employed in eliminating it.—By Textile Machine Works, Reading, Pa. (This company also issues parts catalog for Reading full fashioned machines with general information on subject of full fashioned knitting.)

63. S-W Paint Standardization Plan—valuable booklet telling how protective coatings can effect economies in plant operation and maintenance, describing how each surface is finished to best meet its specific needs, giving ideal lighting and sanitary conditions and economies in increased production. Sherwin-Williams Co., 601 Canal Rd., Cleveland, Ohio.

64. Efficiency and Performance of SKF Roller Bearing Spindles—A twelve page booklet showing the advantages in power consumption, increased production, savings in lubrication, increased yarn breakage strength to be secured through roller bearing spindles. SKF Industries, Inc., Front St. and Erie Ave., Philadelphia, Pa.

65. Why Cooper Hewitt Light is Better Than Daylight—A 16 page booklet explaining in detail the importance of good lighting and the necessity of proper quality as well as proper quantity of light. General Elec. Vapor Lamp Co., Hoboken, N. J.

66. Dronsfield's Patent Portable Auto-Feed Needle Point Grinder No. 176—describing a new departure in card grinding—John Hetherington & Sons, Inc., 250 Devonshire St., Boston, Mass.

69. Monel Metal Equipment for the Textile Industry—A 50-page buyer's guide and catalog with more than 100 illustrations of various items of monel metal dyehouse equipment. International Nickel Company, Inc., 67 Wall St., New York, N. Y.

70. Fafnir Ball Bearings for One Process Pickers—outlining the advantages of ball bearings in guaranteeing smooth, accurate motion, particularly on eveners, as well as uninterrupted production, ease of operation and cleanliness of bearing units throughout the one-process pickers. Fafnir Bearing Company, New Britain, Conn.

72. The Merrow Butted Seam—A 16-page booklet defining and illustrating the Butted seam, describing its properties and outlining some of the advantages to be gained by its use in textile fabrics. The Merrow Machine Co., Hartford, Conn.

73. New Reeves Catalog No. 99—A treatise on efficiency speed control—including valuable information of special importance to textile industry men and production executives outlining advanced methods of speed regulation. Reeves Pulley Company, Columbus, Indiana.

78. Booklet L 1289 A—Loom Motors and Control—giving details of the low installation, operating and maintenance cost of Westinghouse Loom Motors. Westinghouse Electric & Manufacturing Company, Room 2 N, East Pittsburgh, Pa.

88. Dayton Cog Belt Catalog—A 32 page booklet full of vital information on power drives, plainly and simply assembled and arranged so that anyone can select the proper standard drive for any condition. It also provides data for the calculation of drives where acquired. The Dayton Rubber Mfg. Co., Dept., C-11, Dayton, Ohio.

90. Atwood Booklet—Describing Atwood Winders, twisters, wire swifts, and various types of feed rolls—useful to throwsters interested in learning the principal features of various Atwood machines. Atwood Machine Co., Stonington, Conn.

92. Silicates of Soda—A review of the properties of silicates of soda and their various uses. Philadelphia Quartz Co., 121 S. Third St., Philadelphia, Pa.

95. Onyx Processing and Finishing Compound Catalog—A thirty-two page booklet listing and describing entire line of processing and finishing compounds, covering every process on all types of fabric. Onyx Oil & Chemical Co., 15 Exchange Place, Jersey City, N. J.

97. Suggestions For The Modern Silk and Rayon Throwster—describing the various uses for Laurel Brand Products and giving valuable suggestions in silk-soaking, degumming, dyeing, sizing and finishing. Laurel Soap Mfg. Co., Inc., 2600 East Tioga St., Philadelphia, Pa.

99. Bulletin 177. Temperature Controllers. 48 page booklet describing and illustrating the various types of controllers, charts, valves, etc., and their industrial uses. Foxboro Co., Foxboro, Mass.

102. White and Light Shade Cotton Fabrics Dyeing and Finishing—National Oil Products Co., Harrison, N. J.

103. Throwing Rayon Crepe—National Oil Products Co., Harrison, N. J.

106. Cotton System Warp Sizing on Multiple Cylinder Machines—a folder showing the advantages of this type of machine in making warps of acetate and other synthetic yarns and spun silk—Charles B. Johnson, Paterson, N. J.

107. Complete Information on Alemite Lubrication. Showing how costs can be reduced through power lubrication. Alemite Corp., 1828 Diversey Blvd., Chicago, Ill.

109. Some Properties of Starch and Dextrine.—Explaining certain fundamental properties of starch and its derivatives and their action when heated and agitated. Stein, Hall & Co., Inc., 285 Madison Ave., New York City, N. Y.

110. 3-In-One for Industrial Uses—showing the many industrial uses and advantages of this oil. Three-In-One Oil Co., 70 Varick St., New York, N. Y.

114. Denman Parts for All Makes of Looms—showing drawings and dimensions of Denman pickers, hold-ups, bumpers, and bunters made of fabric and vulcanized rubber. Denman Tire & Rubber Co., Warren, Ohio.

115. How to Cut Cloth Room Costs with Automatic Picking Machines and Improved Inspecting Machines—Hermas Machine Company, Walburton Ave., Hawthorne, N. J.

117. Anti-Friction Bearings as Applied to Spinning, Drawing and Twisting Frames—This bulletin shows with detailed drawings how a simplified design of roller bearing applications is made to replace the plain babbitt bearings and lists the advantages that are gained. It deals primarily with better continuous production and in consequence freedom from equipment care and repairs. Hyatt Roller Bearing Co., P. O. Box 476, Newark, N. J.

118. Cotton Picking, Opening and Cleaning Machinery, Cards, Combers, Roving, Drawing, Spinning, Twisting, Rings, Worsted Machinery and Woolen Machinery — Pamphlets are issued on each of the individual machines. Will be sent to subscribers who make requests on the letterhead of the mill and indicate special pamphlets desired. Whitin Machine Works, Whitinsville, Mass.

119. The World's Finest Sewing Machines—a condensed catalog giving details of the various Willcox & Gibbs sewing machines. Willcox & Gibbs Sewing Machine Co., 658 Broadway, New York, N. Y.

120. Goodyear Mechanical Rubber Goods Catalog—40 page catalog giving practical information and tables helpful in the selection of the proper belting, hose or packing to suit the requirements of the mill. Goodyear Tire & Rubber Co., Akron, Ohio.

121. Engineered Packages for the Textile, Dry-Goods and Apparel Industries—Showing the savings to be made through the use of properly engineered packages of corrugated fibre in the shipping of yarn, woven and knitted products. Hinde & Dauch Paper Co., Sandusky, Ohio.

122. Water Filters and Filtration Equipment—Containing complete description of the chemical processes involved in the coagulation and precipitation of foreign matter, the removal of iron, oil, manganese from water and the production of clean water suitable for the textile industry, together with tables of specifications for standard filters, and information showing the extra profits to be made by the mill through reduction in costs and process difficulties, through removal of undesirable impurities in water. Permutit Company, 330 W. 42nd Street, New York, N. Y.

125. More Light with Lasting Cleanliness—a booklet pointing out the many advantages of white paint and the qualities to be looked for to get the greatest value in such paint. U. S. Gutta Percha Paint Company, Providence, R. I.

135. The Pick Method of Weaver Wage Payment—A manual of practical information describing methods to be followed in using Pick Counters; suggested forms, and tables included. Durant Manufacturing Co., 1932 No. Buffum St., Milwaukee, Wis.

138. Constant-Level Oilers—Booklet describing oilers which maintain correct oil level at all times, preventing burning out of motors and bearings. Gits Bros. Mfg. Co., 1851 S. Kilbourne Ave., Chicago, Ill

139. Textile Detergents—Theory of the use of alkalis and control of pH.—This 32 page booklet explains in simplified manner for the benefit of the layman the chemical processes that take place in using textile detergents in the finishing of textile goods. It contains many useful tables and data. Detergent Products Corp., Peachtree Bldg., Atlanta, Ga.

140. Textile Machinery—Improvements in Design and Methods of Lubrication. A discussion of the problem of lubrication of textile equipment, covering operating conditions and factors affecting and affected by lubrication. Card Room Operations, Twisting and Spinning Machines, Silk Throwing, Looms, Knitting Machines, etc., covered. Available in copy of June 1934 issue of "Lubrication." The Texas Company, 135 E. 42nd St., New York City.

141. V-Belt Engineering Data Book—Over 50 pages of pertinent engineering information including data on selecting a V-Belt drive, design of special V-Belt drives, numerous standard tables, charts, and belt and sheave list prices. Manhattan Rubber Manufacturing Div. of Raybestos-Manhattan, Inc., Passaic, N. J.

142. Houghton's Hand Book for the Hosiery Dyer—This book contains the result of 69 years of experience in research and development of processing materials for the textile industries, together with a wealth of other data useful to every hosiery dyer. E. F. Houghton & Co., 240 West Somerset St., Philadelphia, Pa.

143. Winders and Winding—Describing the various processes in the preparation of cotton, woolen and silk yarn and illustrating and describing the different types of Universal winders and the various attachments to suit the particular winding requirements of the various branches of the textile industry. Universal Winding Co., 95 South St., Boston, Mass.

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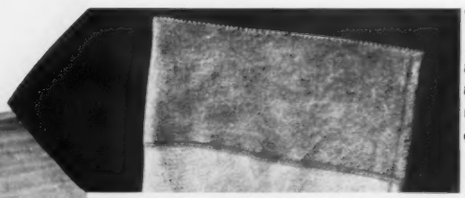

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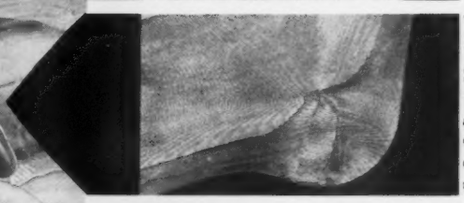

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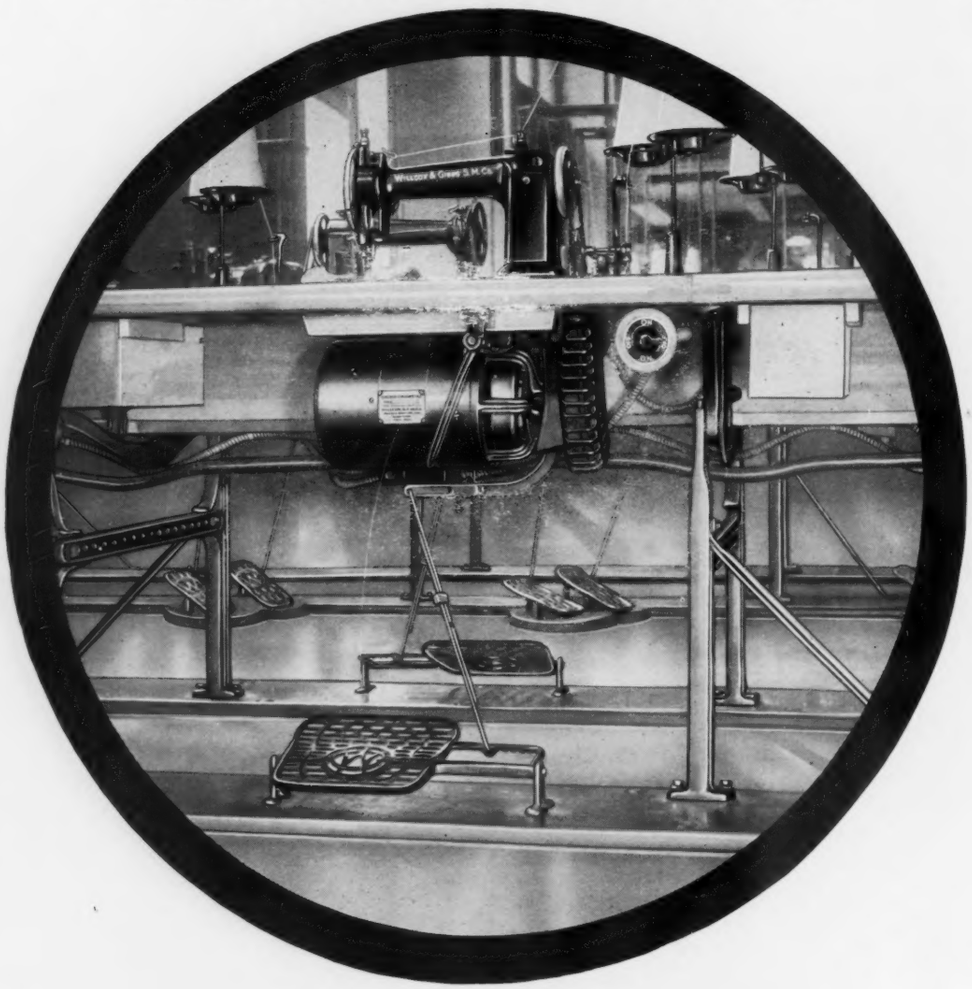

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Recent Development of General Interest in Knitting Industry

Written at Philadelphia, Pa., July 16, 1934.

JULY was eventful as a month of developments in the hosiery industry. While production, notably of women's silk full-fashioned, was being sharply curtailed in some mills, others were officially stated as operating to capacity and having need for the entire output, leaving unanswered, excepting in statistics, the question raised in some quarters whether there was or was not over-production of this construction.

Attesting to the theory of excess output, there came out in some leading retail stores the lowest prices yet announced in 1934. Competition among retailers was as severe as at any time in two years in the face of an indicated determination on the part of many manufacturers to curtail production by more than 12 per cent between July and September, and an expressed willingness among some mill heads to increase the wage rate to compensate workers for the proposed loss of five hours per week. Threatened curtailment and higher prices supplied no incentive for retailer or jobber to anticipate.

Seldom have more meetings of organized hosiery manufacturers for discussion of what were viewed as vital questions been called and so largely attended as in July. The curtailment and wage issues probably never before were so thoroughly aired in the presence of and co-operation with leading distributor representatives.

In the expectation working hours would be reduced by at least five hours a week, the American Federation of Hosiery Workers served notice on the Full-Fashioned Hosiery Manufacturers of America, Inc., that it was canceling the contractural relations agreement with its expiration August 31, this being a necessary formality for escaping being automatically bound by the existing pact for another year. This virtually places the workers' federation and the unionized manufacturers in the same position as before the first agreement was executed some years ago, prior to the manufacturers organizing the body which since has maintained relations under contract renewed from year to year. In serving notice on July 3, of cancellation of agreement, the federation explained that it was "placing itself in position where it can legally take any action that it may feel is necessary if a crisis develops in the next two months."

Three-Point Program of Code Authority Withdrawn

The developments during late June and early July were climaxed with the defeat of the Hosiery Code Authority's proposed three-point production control program. The industry thus entered upon a traditionally dull summer session, under circumstances offering a wide field for speculation as to the fall situation, manufacturers being left, as always in the past, to work out their future among themselves, individually and collectively. The importance of the negative disposal of the recommendations of the Hosiery Code Authority is indicated, in the full-fashioned field specifically, in the accompanying table showing existing minimum wages and the proposed increases, for mills in the South and those in the North.

Stand of Southern Hosiery Association and Southern Attitude Commended

A RARE compliment was paid to the Southern Hosiery Manufacturers Association and to the industry in general in the South by a Northern manufacturer commenting on the attitude of the southerners at the hearing in Washington before a deputy NRA administrator on the proposed three-point production control as drafted by the Hosiery Code Authority. "The southern manufacturers," said the northerner, "impressed me as being more solidly organized than we in the northern centers. They preesnted an almost united front in opposing the proposed changes in the code and, I believe, really held the balance of the power and are to be credited with having exerted an influence that impelled Managing Director Constantine of the National Association of Hosiery Manufacturers to withdraw the proposed code changes, leaving matters as they were before the Code Authority headed upon weeks of hearings and conferences for arriving at the recommendations which finally were submitted and sidetracked after it was developed that the majority of the manufacturers heard from were not in favor of the recommendations in their entirety."

The northern manufacturer, by the way, is an officer of an association of hosiery interests, which would appear to give his gratuitous praise of the southern organization added significance. He said he believed they were making a better job of maintaining steady production, and marketing their products, than are many of the manufacturers in the North, and he said he believed the day was coming when there will be a sharp but friendly competition as between the North and the South in the primary hosiery markets.

Present Code Minimums and Proposed Increases Under Plan Which Was Withdrawn by Hosiery Code Authority

Leggers and Footers	NORTH Present	NORTH Proposed	SOUTH Present	SOUTH Proposed
Class 1—				
36 gauge and below	$18.50	$20.00	$16.75	$18.00
39 gauge	20.00	24.00	18.00	21.50
42 Gauge	21.50	28.00	19.50	25.25
45 gauge	23.50	33.00	21.25	29.75
48 gauge	25.50	39.00	23.00	35.00
51 gauge and above	27.50	46.00	24.75	41.50
Class 2—Boarders	17.00	20.00	15.50	18.00
Class 3—(See Note)	15.00	16.50	13.50	14.75
Class 4—(See Note)	13.00	14.50	12.00	13.00
Class 5—(See Note)	8.00	9.00	8.00	8.00

NOTE: Classifications 3, 4 and 5.

3. Toppers, loopers, seamers, winders, menders, pairers, finished inspection, helpers on knitting (over six months training), pairer-folders.

4. Boxers, gray examiners, folders, cone winders, other production workers, learners (including machine helpers) for the second three months of their training.

5. Learners, (including machine helpers) for the first three months of their training.

Seamless, Machine fixers	Proposed North	Rates South
220 needle and below	$20.00	$18.00
240-260 needle	22.00	19.75
280-300 needle	24.00	21.50
320-340 needle	26.00	23.50

The divergence of opinion on the question of a reduction in working hours was brought out rather

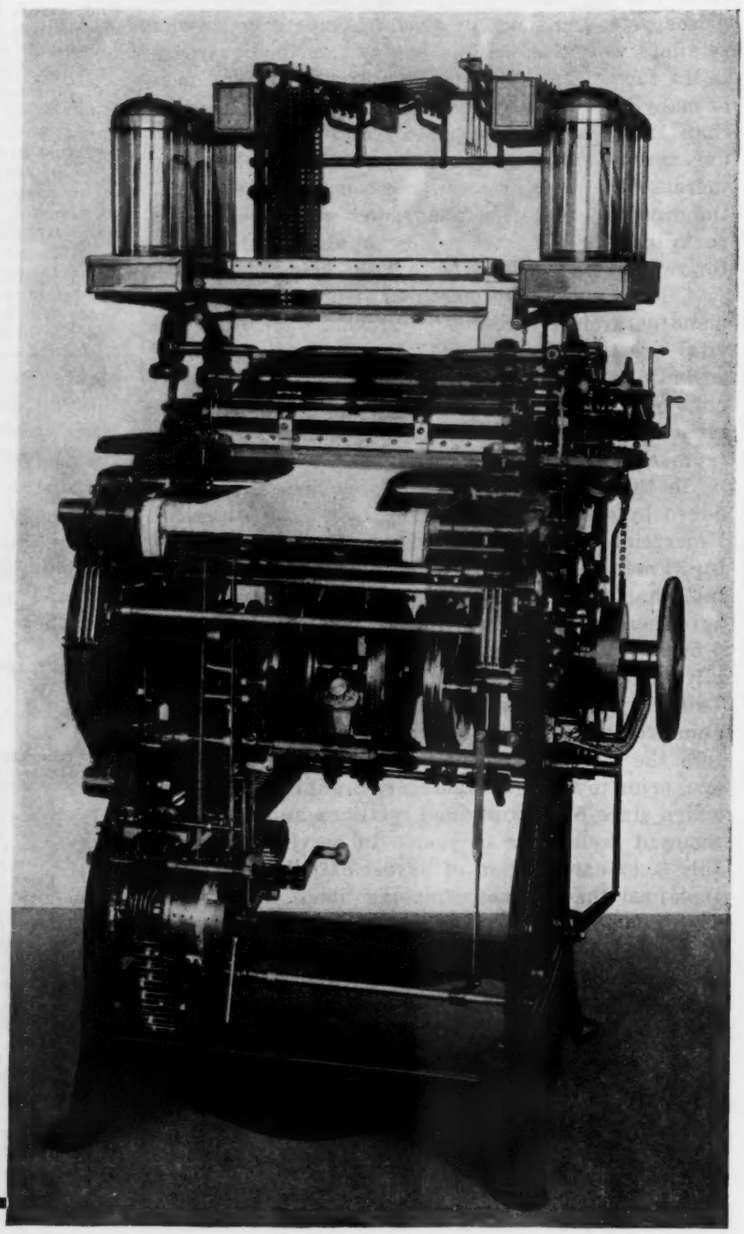
The new yarn container effects a 20% saving in floor space

WILDMAN
THE WORLD'S STANDARD

HERE IT IS! The latest improvement in the Wildman Single Head Full-Fashioned Knitting Machine, which we have promised you.

It's the new yarn container or bobbin rack which effects a 20% saving in floor space and enables the operator at all times to see the bobbins. Easily threaded, as the rack slides forward.

As usual, Wildman scores another triumph.



The
WILDMAN
SINGLE HEAD
Full-Fashioned
Hosiery
Machine

●

Literature on Request
WILDMAN MFG. CO.
Full-Fashioned Division
NORRISTOWN
PA.

prominently during the Washington hearing, July 9, when several manufacturers stated, if correctly quoted, that there was no overproduction of full fashioned hosiery. For example, James P. Gray representing the Gray Hosiery Mills, Bristol, Va., and Henderson, N. C., said, in effect, that for the past several months his organization has been able to make only about half enough to fill its stock, and he is alleged to have said that if forced to shut down for two weeks, "somebody else is going to get a part of our business." Hugo Hemmerich of the Berkshire Knitting Mills is quoted as stating the Berkshire Company was operating two shifts and that there was no apparent overproduction in the full fashioned division. Mr. Hemmerich's appraisal of the situation is in pretty close accord with the statistics as to full fashioned hosiery production in May, orders booked and unfilled orders at the end of the month.

Speaking for the Phoenix Hosiery Mills, Milwaukee, J. P. Margeson told the Deputy Administrator at the Washington hearing that "chaotic conditions will surely result without some form of regulation."

A form suggested by manufacturers, speaking for themselves only and not assuming to dictate to the Hosiery Code Authority, is to manufacture hosiery only against orders; when there are no more orders to fill, cease producing. "If we will agree to do this and live up to the agreement," said a leading manufacturer, "we will have established a short cut out of the chaotic situation that has been described to us, without the aid of a Code Administrator."

Manufacturers discussing the difficulty of unanimity on a plan of control recall that at the hearing on July 9 in Washington representatives of the Real Silk Hosiery Mills maintained there was no surplus and insisted there was less stock in manufacturers hands at this time than in the last two years. A Massachusetts manufacturer asserted the full fashioned industry is shipping more goods than the mills produce. This is the kind of testimony, in conflict with that of manufacturers having visions of chaos, that makes it difficult for the trade to unite on any plan for relief from conditions complained of as represented mainly in low prices, in many cases doubtless representing losses for producers.

The difficulty in trying to get along under any production control program not enforcible by some recognized authority lies in the fact, as has been frequently pointed out, that manufacturers are prone to view conditions as they, individually, are affected, giving little consideration to the welfare of their industry as a whole. Yet, the point is made that in the diversity of opinion, now and in the past, on the question of over production, the industry always has been able to find a way out of chaos. Some went to the wall; others survived; and the survivors who are in the present upheaval are viewed as likely to be among the survivors when the present problems of the industry have been solved.

THE extent to which codes for the proposed regulations of industry and distribution may breed discord within trade organizations is perhaps more definitely indicated in the case of hosiery. Since the adoption of the first codes for the hosiery industry, it is pointed out, more sectional groups have sprung up than ever before were known to exist. This may eventually result in a better all-around understanding and cooperation, as the groups obviously represent the sentiment of a majority of their respective memberships.

The first organization representative of a geographical section of the industry was that of the Southern Hosiery Manufacturers Association, maintaining headquarters in Charlotte, N. C. Since then, the Full-Fashioned Hosiery Association, Inc., has expanded its field of action and is said to represent about 60 per cent of the full-fashioned output in the United States. This organization has its office in Philadelphia and is headed by William Meyer as its president, former president of the National Association, who is chief executive of the Apex Hosiery Company.

At somewhat recent meetings of this association, it appeared that it comprised three distinctive groups, the largest embracing Philadelphia and New Jersey and adjacent sections. Next in order in number of mills is, of course, the Reading area, and recently there entered the picture what is known as the North Penn group, comprising manufacturers operating small and moderate sized plants in territory bordering on the North Penn Railroad, from Philadelphia to Allentown.

The North Penn group, at a meeting of the association, comprising the three groups, advocated that the production of each mill in the full-fashioned industry from January 1 to June 30, 1934, inclusive be used as a basic unit of production for that particular mill and that a definite percentage of not less than 25 per cent be designated as the basis of curtailment for each mill in the group or section. This proposal was voted down at a meeting of the association. Another proposal that received similar treatment came from the directors of the Association and provided that machines producing the first 500

(Continued on page 105)

A Separate Seamless Association?

Philadelphia, Pa., July 19, 1934.

IT IS stated by representative seamless hosiery interests that there is being inaugurated in a quiet way a movement for organizing the seamless manufacturers as a separate association. Proponents of the proposal make the point that the seamless and full-fashioned frequently have wholly different problems and that neieher group can be of much assistance to the other in a solution of its exclusively own problem.

There are several angles from which the seamless men look at the proposed separate organization. One viewpoint relates to the numerical and financial strength of the full-fashioned industry as calculated to overshadow the seamless group. Certain collateral interests are understood to be furthering the movement for a realization of the ambitions of the seamless stocking manufaceurers, and it is authoritatively stated that some of the New England manufacturers are among those in the foreground as abetting the movement, whish, if it succeed, may be followed by submission of a strictly seamless code to the NRA authorities.

It has been intimated that as infants' socks are a distinctively seasonal item, the manufacturers are being considered as a probable group of the proposed seamless organization.

KNITTING KINKS

Practical Discussions by Cotton's Readers on Various Knitting Subjects

Another Mill's Practice on Seaming

This man describes a "kink" about seating the operators which adds to comfort and efficiency . .

EDITOR COTTON:

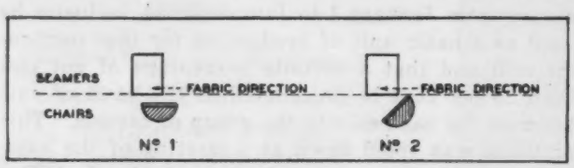
There were several questions with reference to seaming full-fashioned hosiery on Union Special machines asked by "CONTRIBUTOR No. 6298" on page 95 of the March issue of COTTON.

Answering these questions, first as to the best speed to run on these machines, I wish to say that on our Union Special seamers we have found 2,750 r.p.m. to be the most satisfactory for us. Our work ranges from four-thread to seven-thread.

The contributor next wants to know what percentage of reseams are had in other mills due to poor matching. He states that his percentage of reseams averages two per cent. I might state that we grade similar to the basis given by the contributor. He said, "We consider a stocking a re-seam if the stocking is off three courses at the heel or bottom of the welt, or if narrowings are off more than the distance between two narrowings, or if the picot in the welt does not meet." As I say, we grade on this same basis, and we find that our entire department averages one-half of one per cent re-seamed for mismatched work. I would suggest that with two per cent re-seams, this contributor make a careful inspection of the legs coming from his knitters, because heads with tight and loose sides, uneven splicing tension, poor selvages, and the like, tend to retard seamer production and make perfect matching almost impossible.

Our Union Special operators, working on 300-needle seamless goods, putting a seam in the boot only (none in the welt or sole) do an average of 8 dozen per hour on the four-thread numbers we make.

The fact that this man has asked for a discussion of seaming subjects, prompts me to mention some changes that we have found to be profitable. Operators are usually taught to sit directly in front of Union Special seamers while running the fabric through. We found that better matching and higher production was made possible by training the operators to sit at an angle of about 45 degrees as is shown in the accompanying sketch.



The position No. 2 enables an operator to insert and align the two selvages quickly, and apply an evener tension to both sides of the fabric while feeding it through the guides. The operator's chair must be high enough to enable the elbow to clear the top of the table without touching, and the feed-treadle should be turned sideways to accommodate the new position of the operator.

We have always had difficulty in keeping the operators from breaking the seamer chain too short or leaving it too long, and frequently letting pieces of the chain accumulate on the floor or get into the goods to be found later in the dyeing machinery or inside the hose at the pairing. To correct this it was found better to provide each operator with tubular receptacles into which the dozens were seamed without breaking the seamer chain between the stocking. With the five dozen stockings chained together (we use the five-dozen system) the tickets for the bundle separator are dropped into the receptacle. The next bundle is put on top of the separator as it is run, and full containers are then taken to the inspectors.

By not breaking this chain, the seamers work faster, concentrate on matching, and the seamer cost is lowered. With this saving the inspector rate can be increased for cutting the unbroken chain. For lower re-seams and better matching, we suggest giving this suggestion a trial.

CONTRIBUTOR No. 6326.

WE invite our readers to make use of this department for the discussion of any and all problems arising in connection with the knitting mill from the office to the packing and shipping departments. Questions, answers or letters need not conform to any particular style and will be properly edited before publishing. All questions will be answered as promptly as possible. The names and addresses of the contributors must be given, but will be held in confidence and a pen name substituted when printed. All acceptable contributions other than questions will be paid for after publication. The editors do not hold themselves responsible for any statement of opinion or fact which may appear in this department unless so endorsed. This department is open to all.

◆ ◆

The only yardstick for measuring value in needles is their ability to produce profitable merchandise. That we are America's largest producers of Spring-Beard Needles, and that nearly all manufacturers of fine quality silk stockings are standardized on Royersford needles is a tribute to profitable performance.

The prescription for better knitting

ROYERSFORD NEEDLE WORKS, INC., ROYERSFORD, PENNSYLVANIA

Southern Office: Provident Bldg., Chattanooga, Tenn. • Louis Hirsch Textile Machines, Inc., Special Representatives

ROYERSFORD NEEDLES

Textile Machine Works Wins Patent Suit Against Alfred Hofmann, Inc.

Textile Machine Works owns and controls U. S. Patent No. 1,713,628, covering an attachment for making the reversible reinforced selvedge effect such as is generally used in producing a "cradle foot", "clocks" and other reinforcing and ornamental effects in full-fashioned stockings.

Because of the universal demand for an attachment to accomplish this in the manner of the Textile Machine Works attachment, certain manufacturers and importers of full-fashioned knitting machines saw fit to ignore the exclusive rights granted to Textile Machine Works under this patent.

Consequently Textile Machine Works was forced to protect its legal rights, and a suit was brought against Alfred Hofmann, Inc., for patent infringement.

The case was tried in the U. S. District Court, District of New Jersey, before Judge Avis, who rendered a decision to the effect that U. S. Patent No. 1,713,628 was valid.

This decision was immediately appealed by Alfred Hofmann, Inc., and the case came before the United States Circuit Court of Appeals for the Third Circuit on June 15th.

The Following Unanimous Decision of the Judges Again Upholds the Validity of the Patent

"The patent involved in this case was so thoroughly discussed in Judge Avis' opinion that we find ourselves in no position to improve on what he has said. After due consideration, we are of the opinion the decree below should be affirmed, and affirmed on his opinion. In so doing, we note that this patent presents an unusual state of affairs.

"What was known as the 'cotton' knitting machine had been in use for many years. Its construction involved some one hundred patents. The machine cost $10,000.

"The plaintiff devised a mere attachment, costing some $350, which can be attached to the $10,000 machine and gives this latter a wide sphere of manufacturing capacity which it did not before possess.

"This attachment was so valuable—and there is no contradiction as to this—that no one would now buy one of these $10,000 machines without having an attachment such as the plaintiff's patent disclosed. Its worth is evidenced by the fact that in four years following the issue of the patent, six thousand of these attachments were sold at a cost of more than $2,000,000.

"When this patent was disclosed to the plaintiff, an extensive manufacturer of knitting machines, the patentee was at once paid $20,000 for it. We have a finding by the patent office of the fact of invention. We also have the fact of invention found by a trial court. We see no reason to disturb such findings.

"Accordingly, the case is affirmed."

More About Analyzing Time Required for Different Phases of Full-Fashioned Knitting

EDITOR COTTON:

In the March issue, in "KNITTING KINKS" on page 95, "CONTRIBUTOR NO. 6301" asked what the production should be on a four-thread full-fashioned style with two stripes in the welt and three picot dips, running 60 courses per inch for 1,448 courses on a 24-section Reading legger. Assuming that this is a 42-gauge legger, I would like to state that our operators on a similar style produce an average of 12½ dozen in 8 hours. We might mention that both operators in the aisle help each other when it is convenient in making yarn changes, racking heads, inserting welt bars, and turning welts.

With regard to our time records, I wish to say that we have maintained such studies for all the mill operations for the purpose of locating individual operators' lost motion or deficiency. However, we do believe that it would be rather difficult to compare these time studies, taken with stop watches on nearly every operation, with those in other mills, for the reason that too many elements enter into the computations. Each mill has a different local condition or system; as an example, welt turning in our mill differs from the practice in other mills in time studies because we have both operators in the aisle help each other in this operation while other mills may not do this. Every item in detail would have to be mentioned in making such a comparison.

Among the data which this contributor would have to offer, to get any mill to check or compare time on operations, would be the courses in each part, such as the welt, and the courses per minute for each of these parts. If his picots are made after or before welt turning there would be another difference, due to the lowering of the picot attachment taking more time after welt turning than it would if they were made before welt turning. The speed used in the high and low heels should be mentioned, etc.

As a means of improving backward operators, we think the time-study is a great thing and have used it to locate the lost motion on certain operators with success. Our foremen frequently find that some operators who are fast in welt turning are slow in making yarn changes or in re-topping press-offs. Coaching in the place where it is needed goes a long way toward improvement in these cases, and nothing can beat the stop-watch for finding out just why one operator is slower than the others.

Comparing a mill that makes many style changes with one that runs throughout the year on one or a few styles would show an unfair difference. Where a mill is operated on many styles or one has constant style changing, there is not much of a chance to strike a good time-study average. In one case the machines and the operators just about get settled to an average production when an order comes for a change and upsets the time-study.

Such specific information can be of great help within a mill, but to attempt a comparison of a group of mills in such minute study would require the listing of every detail that enters into the computations, before such comparisons could be considered at all practical.

CONTRIBUTOR NO. 6326.

A Discussion of the Parts of Scott & Williams Knitting Machines

Plate XXXI

(This continues the series of short articles discussing the machine parts on Scott & Williams machines, by taking up in order the various plates in the manufacturer's catalog with which all men using this make of machine are familiar.

The first article, on page 126, October 1932 issue, covered Plate I, Plate II, and Plate III; and the second article on page 86, November 1932 issue, covered Plate IV. The third article on page 97, December 1932 issue, took up the parts shown on Plate V. The fourth article on page 94, January 1932 issue, covered Plates VI, VII and VIII. The fifth article, on page 101 of the February issue, covered Plate IX. The sixth article, on page 73 of the March issue, covered Plates X, XI and XII. The seventh article, page 84, April issue, covered Plate XIII, and the eighth, page 89, May issue, described the parts on Plate XIV. The ninth article, page 81, June issue, covered Plates XV and XVI. The tenth article, page 97, August issue, discussed Plates XVII and XXI. The eleventh article, covering Plates XVIII and XXII, appeared on page 93 of the November issue. The twelfth article, covering Plate XXVIII, was on page 95 of the January 1934 issue. The thirteenth article, covering Plate XXIX and beginning Plate XXX, was on page 98, March 1934 issue. The fourteenth article, on page 125, June 1934 issue, completed the discussion of Plate XXX.

It is suggested that in reading these discussions, the reader turn to the plate in question in the catalog and refer to it while reading the comments found in these articles. Furthermore, it will be a good idea to clip these discussions and file them in the catalog along with the plates to which they refer.

The numbers in parentheses following the names of parts are the same numbers used by the manufacturers in referring to the parts in the catalog.—The Editor.)

Plate 30—S. & W.

EDITOR COTTON:

Cross-Bar

The Model K cross-bar (5557) as well as the remaining parts which constitute the complete assembly shown on Plate 30 are still in use on the Model K machine of today. The ever increasing demand for ladies' fine gauge seamless hose made it necessary to change the design of a few parts, but as a whole the assembly is just as it was on the old Model K of many years ago. One of the changes which the fixer appreciates very much is the new type adjustable horizontal gear shaft which replaces shaft (6871). Constant shimming with washers or renewing shafts on account of excessive end play is a thing of the past. A simple adjustment on the new shaft assembly makes it possible to take up all end play and thus make the small horizontal bevel pinion (6912) and spindle bevel pinion (6911) mesh perfectly.

In a like manner, the large horizontal bevel pinion (6907) and drive shaft top bevel pinion (6908—Plate 28) can also be meshed accurately. The new arrangement is also provided with set screws in place of the old style taper pins in all pinions; this also adds to

flexibility and greatly simplifies adjustments.

In addition to the above, all pinions on the new device are of the *spiral miter* type in place of the plain miter as shown on the plate, all of which means that the manufacturers have gone a long way at considerable expense in order to improve the cross-bar assembly.

The cross-bar itself or the various pinions do not give any particular trouble except of course such trouble as is caused by ordinary wear and tear, accident or abuse. Make sure that the bevel pinion (6912) and spindle pinion (6911) are properly timed according to markings when they are removed and replaced for any reason. A regular and thorough lubrication of the various moving parts should not be forgotten.

One of the most common ailments with cross-bars and dials is that they get out of center with the cylinder. This can be determined by using a centering jig or gauge and a testing spindle which are supplied by the machine builder. The dial (9140) must be *absolutely in center* with the cylinder if results are to be secured. There is no such thing as *pretty close* or *about right*, when it comes to centering a dial on a fine gauge Model K; it is either *right* or *wrong*. And let me say right here that if it is wrong the fixer may as well get busy and do a real job, or he will be in plenty of hot water.

Now, what causes cross-bars and dials to get out of center with the cylinder? If this trouble shows up on a new machine just received from the machine builder it is simply a case of poor workmanship (something which the builders do not tolerate) and such jobs rarely get by the testers. The only remedy in such a case would be to reset the cross-bar, making sure that it was actually out of center by testing and not guessing, because of some kind of make-up or transfer trouble, broken dial jacks, etc.

When such trouble shows up on an old machine, one which has been in use for a long time, there are quite a number of things which can directly or indirectly cause the dial and cylinder to get out of center with each other. Some of the most common causes are worn gear rings (5933) and worn bed plates (5553), both of these parts being shown on Plate 14. Frequently a combination of ailments is responsible for dials getting off center. I recall an incident which will illustrate this.

One of our younger Model K fixers was having some trouble with an old machine breaking needle butts here and there over a space of about 20 needles. A careful inspection revealed that some of the walls were broken off immediately next to the cylinder proper (usually termed loose walls), others in the same spot were badly scarred, the cylinder needed some new walls in that bad spot to correct the trouble. The cylinder was removed and sent to the shop. While it was being repaired the fixer examined the jack cams and found them in good shape; the stitch cams, end cams and center cams needed re-polishing, so he went over them thoroughly while he had the opportunity. He replaced the cylinder as soon as it came back from the shop, oiled it up liberally, and allowed the machine to limber up for several hours as he had been taught to do in such cases. When he started the machine up, he immediately began to have trouble with broken dial jacks in both make-up and transfer. He tried both advancing and retarding the dial, but the results were *nil*, the dial jacks simply would not come out between the cylinder needles as they should.

It looked like a case of dial out of center, so he proceeded to test it with the centering jig and to his surprise found the dial out of center. He never had a bit of trouble of this kind with this particular machine before and had done nothing to it except have the cylinder repaired; surely, he thought, that had nothing to do with getting the cross-bar out of place.

His reasoning was sound. The cross-bar was still in its original position but it was not in center with the cylinder. The young fixer in question was one who was very anxious to get to the bottom of his troubles and really find out what was wrong, so he called on one of the veterans to help him out. This is what they found:

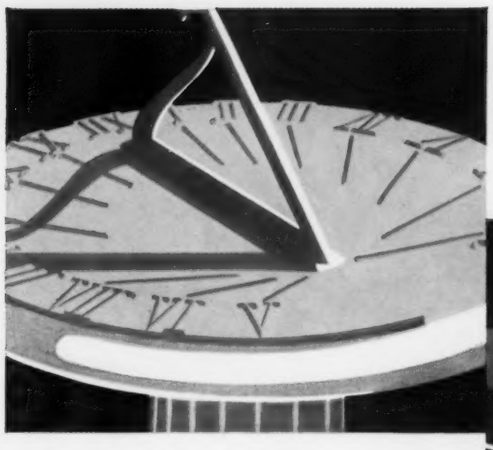
The man who repaired the cylinder failed to *true up* the dozen walls he put in. He filed them down by hand and they *seemed* to be in a circle with adjoining walls in the cylinder, but they were not. He had left a hump in the center of the repaired place. The gear ring and bed plate in the machine had been worn some and the hump on the repaired place in the cylinder forced the gear ring to one side and consequently threw the cylinder out of center with the cross-bar. The cylinder was returned to the shop and put in a lathe and the walls in the repaired place were ground true with the others by using a tool post grinder. The cylinder was replaced and the machine started up without further trouble. All agreed that this was an unusual case, but it is a good illustration of some of the things which can directly or indirectly cause a cross-bar and cylinder to get out of center with each other.

The Dial

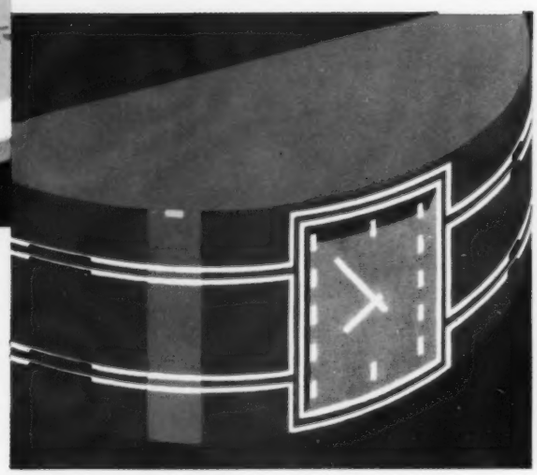
A simple method of raising or lowering the dial and locking it in the desired position is provided by the dial spindle nuts (6872-1) and (6872-2). The proper height of the dial in relation to the needles and sinkers is important. As a rule, the dial can be set high enough to permit placing a needle butt between the bottom of the dial jacks (when they are out on the transfer side) and the top of the sinkers, according to the gauge of the machine. This brings the distance between the jacks and sinkers to about 1/32-inch for a 48-gauge machine. Much will depend on the yarns being used and how loose or tight the hem is being knit.

Many fixers make a mistake by putting excessive tension on the dial jacks; merely enough tension to keep the jacks in position and prevent them from creeping out is required. An occasional application of white vaseline plus a few drops of needle oil *daily* will keep the dial jacks well lubricated.

When dial walls become bent through jam-ups and the like, every effort should be made to straighten the walls thoroughly; using a slot file excessively is dangerous. If a slot file must be used, grind off the cutting edge on one side of the file so the bottom of the slot is not cut deeper or roughened while filing off

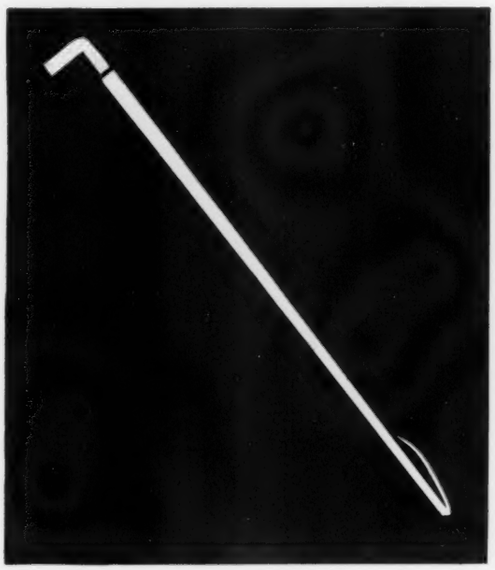


A sun dial used to be adequate——



but an electric clock is today's way

TORRINGTON NEEDLES ARE MADE TODAY'S WAY



Industry turns to machinery these days... because it must have the accuracy that only machinery gives.

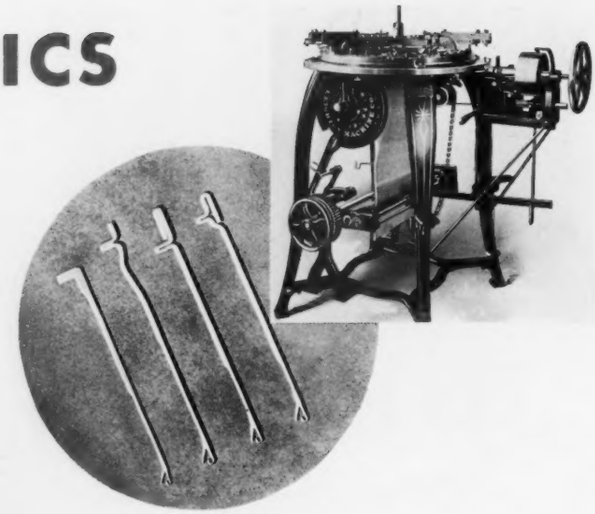
That's why we make Torrington needles by machine. We want them to have this advantage of precise manufacture, of *mechanical* uniformity, which is so vital.

We want them to be as accurate, for instance, as the modern clock. Here is a smooth-performing, delicately balanced object... *today's* version of the crude, hand-hewn sun dial by which ancient peoples "guessed" the time.

Like the modern clock, Torringtons are mechanically produced..."made today's way"... by machine.

TORRINGTON *SPRING BEARD* NEEDLES

Fine FABRICS



● Millions of needles are busy, day in and day out, knitting the fabrics that this country wears. *But only the best needles knit the truly fine fabrics* . . . the even, faultless work that sells for profit.

For this kind of fabric, it's wise to buy Torrington needles. Equipment *can't* be too good, and with Torringtons you know you have needles that are made with all the care and skill and precision that it's possible to apply.

The Bradley Knitting Company use The Leighton Automatic Rack Sweater Machine and Torrington Needles to produce the fabric in this young lady's sweater.

The Torrington Company

ESTABLISHED 1866

Torrington, Conn., U.S.A.

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THE TORRINGTON COMPANY	UNITED BANK BLDG.	GREENSBORO, N. C.
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LOS FABRICANTES UNIDOS,	964 CALLE BELGRANO.	BUENOS AIRES

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TORRINGTON *Latch* NEEDLES

burrs on the side of the dial walls. Time the dial so the dial jacks come out exactly in the center between the cylinder needles when the jacks are fully out in the make-up and transfer. Keep the bottom of the dial smooth so it will not disturb the welt presser or cause the double sole yarn or knitted fabric to hang. A smooth dial is especially important if the machine is equipped with a fashion seam attachment.

The Operating Levers

The transfer loop forming cam operating lever (5551) and the transfer cam operating lever (5560) are both pivoted on the shear rod lever stud (6873); both levers are provided with an adjusting stud (6898). The lever (5551) controls the movement of the cam bracket (8266) and loop forming cam (8417). The lever (5560) controls the movement of the bracket (8267), push-out cam (8263), and cast off cam (8264).

In adjusting the levers, make sure of a little play between the bottom of the respective cams and the top of the low butt jacks when the brackets and cams are half way down. Also that the respective cams come down flush with the bottom of the outside transfer cam (8260) when the brackets and cams are all the way down.

Some of the more common ailments which cause broken dial jacks, make-up or transfer trouble, are cams (8417), (8264), (8263) becoming worn or loose on their respective brackets; springs (8693) becoming broken or stop screws (6894) getting loose. When the stop screws get loose, the bracket, in addition to binding, will also swing around and prevent the jacks from coming out at the proper angle. Checking over the various cams, screws, springs, etc., at regular intervals will save the fixer a lot of time, work and worry. Accidents and abuse will of course take their toll; carefulness and accuracy in fitting and adjusting the different parts will pay dividends.

The Transfer Cap

The transfer cap (5546) is held in position by the holding pin (6892) which passes up through a hole in the cross-bar and is kept in the desired position by the binding screw (15277). The two tubes which are attached to the transfer cap act as a pocket for springs (6893) and a guide for brackets (8266-8267). Occasionally these tubes will work loose. They can be tightened by tapping with a small ball peen hammer. Care must be taken not to overdo the riveting operation as the dial caps are quite brittle and will not stand excessive pounding.

The outside transfer cam (8260) is fastened to the bottom of the dial cap. This cam is not troublesome and its usefulness can be prolonged by re-polishing the inner surfaces occasionally. Keeping the dial jacks well lubricated will help prevent unnecessary wear on the points of this cam.

The yarn clamp (8271) is dependable and very simple to adjust. The amount of tension necessary to hold the yarns is regulated with the spring (6886) and adjusting collar (6888). Bad yarn changes are very often caused by the clamp (8271) not resting squarely on the dial cap. A simple way to correct this is first remove all yarns from under the clamp; next loosen the bracket screws (8270); then hold the clamp firmly down on the dial cap with one hand (so the clamp can seat itself); then tighten the bracket screws while the clamp is being held down.

Excessive tension on the yarn spring clamp (8407) will do more harm than good. Be sure that all yarns go under the spring clamp at every yarn change and back toward the clamp screw as far as possible. Do not try to make the spring clamp do the work of the yarn clamp (8271). It was not intended for that purpose. It does help to hold the yarns during changes if it is properly set. Its main function, however, is to guide the yarns under the clamp (8271) and into the shear blades when the clamp is up and the blades are open.

The shear blades (8404-8428) seldom give trouble. Some fixers sharpen the blades with an oil stone; a keener cutting edge can be secured by grinding the blades on a fine grit emery wheel. In doing this be careful not to burn the blade and thus ruin the temper.

Some of the parts shown on Plate 31 are quite delicate and will not stand a great deal of rough usage or abuse, yet it is a known fact that more trouble is caused by carelessness and abuse than by normal wear and tear. All seamless hosiery machines have become more complicated during the past 15 years. Some have been almost completely re-designed in order to make room for the ever increasing number of attachments. In some cases it is hard to believe that it is still the same machine built by the same company. Truly progress has been made.

Compare the plain 240-needle, 3¾-inch Model K of 15 years ago with the 340-needle, 3½-inch machine which was shown at the 1934 Knitting Arts Exhibition equipped with gusset toe, square heel, cradle sole, improved fashioning device and a 25-step spiral attachment, and you will readily agree that this is the Scott & Williams machine age.

Plates 32 to 35 inclusive will be omitted in this series of discussions. These plates show the parts which are necessary to change a Model K to a K-G, which is essentially the same as a Model K but capable of making an imitation ribbed fabric for the tops of various kinds of hose. Few if any of these machines are in use now-a-days; they are fully described on pages 23 to 25 inclusive in the Scott & Williams catalog.

The next discussion in this series will cover the parts shown on Plate 40, as applied to the various models such as B-5, K, and B-3.

CONTRIBUTOR NO. 6038.

The road to that bigger job is a long one with many steep grades—there are many places where you will have to put on chains—the thing to do is to have the chains when you need them.

The road that is easy to travel—anybody can travel, therefore it is full of overseers and superintendents who are just drifting along with the crowd and incidentally getting the same pay that the crowd is getting.—OLD-TIMER.

Softer AND MORE Elastic

ABERFOYLE *Durene* YARNS
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Whatever the product you make . . . knitted, braided, or woven . . . you will profit from the superior qualities of Aberfoyle Durene Yarns. Our new and exclusive process of mercerization produces a yarn of unquestioned strength that is much in demand because of its softness and greater elasticity. Besides, this yarn takes the dye so evenly and reflects such depth and richness of color that it helps you to produce a more attractive, saleable line.

These splendid qualities of Aberfoyle Durene Yarns are another example of the improvements which are constantly resulting from the research and experimentation of our staff of technicians and chemists . . . working to make our products more desirable to you.

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MANUFACTURING COMPANY
123 SOUTH BROAD STREET PHILADELPHIA, PA.

General Knitting Developments

(Continued from page 95)

dozen pairs of hosiery per week in each mill be permitted to operate on the 40 hour per week basis, with the additional proviso that the minimum pay for the 40-hour week operation be increased 14 2/7 per cent over the minimum suggested for the 35-hour week operation.

The action taken at the meeting of this association just prior to the hearing in Washington on July 9 indicated that there was to be rough sledding at the hearing for the 35-hour week proponents, and it was realized at an informal meeting of manufacturers at the Mayflower Hotel in Washington on Sunday night preceding the Monday hearing that, with the southern manufacturers reported lined up on the negative side, little was to be accomplished through the hearing. As a result, with the withdrawal of the 3-point production control program and the action of organized manufacturers preceding that withdrawal, the hosiery industry appeared to face a more confused condition than previously existed.

The situation was somewhat complicated further by the action of the American Federation of Hosiery Workers in notifying the Full-Fashioned Hosiery Manufacturers of America, Inc., of cancellation of the agreement between the union and the unionized mills, which will expire August 31. This left the unionized manufacturers and the American Federation to formulate a new agreement beginning with September 1. It at once was the indicated impression in the trade that in view of the confusion, the formulating of a new pact satisfactory to both parties had been made more difficult than would have been the case had the cancellation notice not been given.

Blue Eagle is Returned to Harriman Hosiery Mills

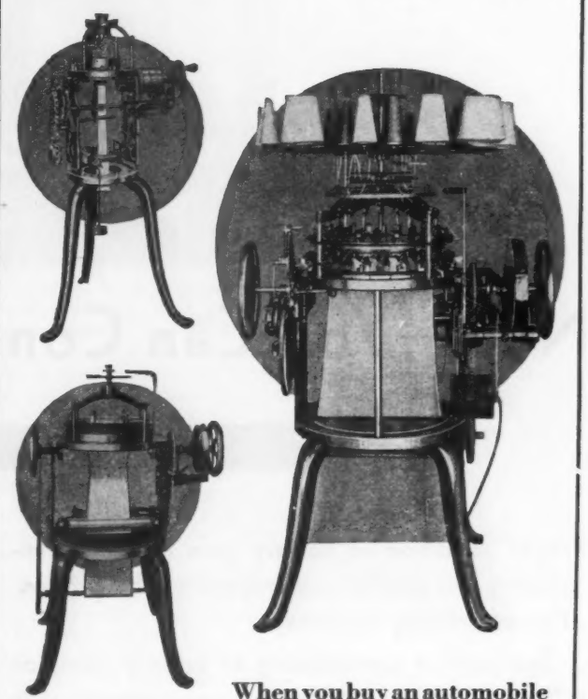
On Friday, July 20, it was announced that A. R. Glancy, assistant field administrator of NRA, had arranged an agreement between the Harriman Hosiery Mills, Harriman, Tenn., and striking employees of the plant, whereby the NRA's Blue Eagle would be returned to the mill, and on the following Monday, work was resumed in the plant.

This mill has been closed for several months, and 600-odd employees, some of whom had struck charging discrimination in discharging, were thrown out of work when the mill shut down after its Blue Eagle was removed by General Hugh S. Johnson.

The agreement, accepted by the mill provided that the strike should be called off, no suits or prosecutions to follow as a result of the strike; 25 of the strikers to be re-employed within 60 days after acceptance of the agreement by strikers; thereafter, three out of every four hired to be strikers until 25 have been hired or up to January 1, 1935.

At press time for this issue, General Johnson, on a western trip, has wired to Washington that the Eagle again be removed. Everything is marking time until the general returns to Washington and finally clarifies the situation. Meanwhile, the mill is operating.

MODERNIZE *your* PLANT *with* BRINTONS



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Special Knitting Machines From ¼ inch to 36 inches.

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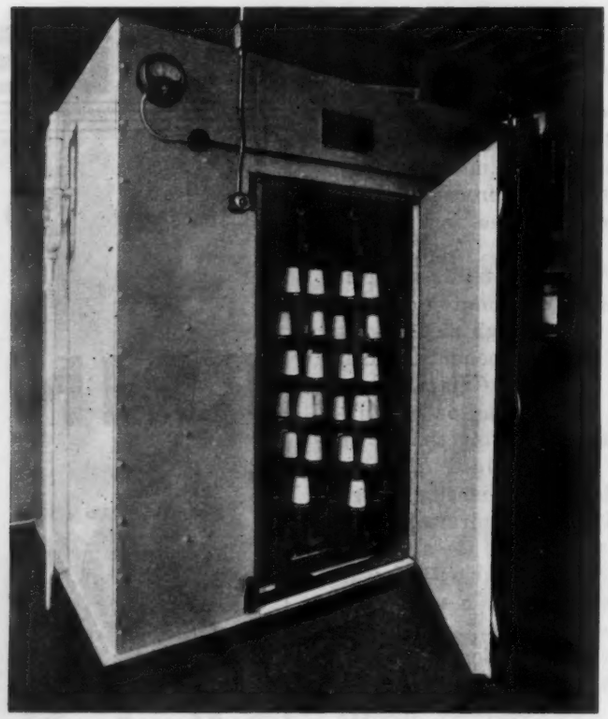
of EVERY Kind for EVERY Purpose



Now—You Can Condition Yarn Perfectly

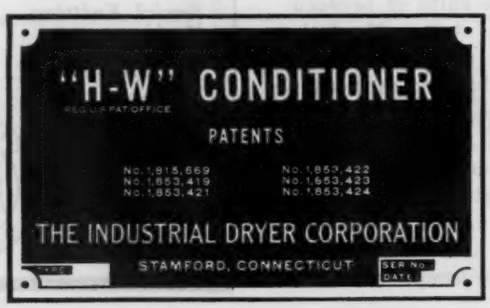
Proper condition of hosiery yarn is vital in improving the quality and increasing the production of knitting machines.

The perfect conditioning of hosiery yarns on the cones is a simple and easy process with the "H-W" CONDITIONER. Back-winding is no longer necessary. The thorough, uniform conditioning of every fibre in every cone is accomplished with a scientific accuracy never before known in a conditioning machine.

The principle used in the "H-W" CONDITIONER is a water vapor and it is the only apparatus in which air is maintained 100% saturated with true vapor—not atomized water that soaks the cones — but true vapor that penetrates evenly and thoroughly with the same degree of moisture inside and out. Automatic controls maintain the proper operating conditions at all times. Only one man is required for loading and unloading — no rehandling necessary during conditioning.

Sleazy knitting is a thing of the past in mills using the "H-W" CONDITIONER, and the savings due to better production and higher quality pay for the machine in a short time.

Find out about this perfect machine today. Ask us for full details—no obligation. Address THE INDUSTRIAL DRYER CORPORATION, STAMFORD, CONNECTICUT.



THE KNIT GOODS MARKETS . .

"Ringless" Hosiery Is of Increasing Importance .

"RINGLESS" hosiery promises to occupy several important pages in the annals of the full-fashioned hosiery industry for 1934, judging by apparently trustworthy reports of plans of the Textile Patents Corporation and "ringless" interests generally. This is indicated not only in the reports of preparations for general distribution of the "ringless" type, but in the advertisements of some of the leading stores and at least one important full-fashioned mill. It was noted that last month the Dexdale Hosiery Mills were supplying "ringless" chiffons exploited in a department store at 79 cents a pair, the promotion sale in this instance being accompanied by announcement that after this sale the price would be $1 a pair.

Other well known retail establishments in Philadelphia alone were offering "ringless" chiffons in the regular way at 85 cents a pair, in which the John Wanamaker Store and J. B. Sheppard & Sons, the latter recognized as one of the three specialty shops of Philadelphia, were conspicuous. The Sheppard Company accompanied each sale with its guarantee as to service and quality. It is true that in at least one department store, the "ringless" was exploited at 69 cents, in an assortment of only five colors, however, and having plaited soles.

One establishment offering real "ringless" told its trade that "the feet and legs of these hose are made on machines with three-carrier attachments, thereby insuring absolute clearness." This was laying probably more credit to the attachment than is claimed for it, as in even those mills where very rigid inspection is exacted, some stockings are thrown out as not absolutely clear, the "irregulars" representing a very small per cent of the machine production, however.

Will $1.00 Be the Price?

So far as the plans of the Textile Patents Corporation and manufacturers to whom licenses have been or may be issued for producing "ringless" stockings have been revealed, it seems likely that $1 a pair will be set as a possible retail price, with a reasonable differential for retailers as against jobbers. It is indicated that interests controlling the patents for the three-carrier device aim to maintain a reasonable price, as the first real step in eliminating death-dealing price competition. It is assumed the $1 price will apply more particularly to the 45-gauge stocking, although it is not improbable there will be abundant leeway for competition in quality so long as specific standards are adhered to.

If, as it is commonly assumed, the patent covering the three-carrier attachment applies to fabric as well as to the device itself, then, it is held, manufacturers not licensed to produce "ringless" hosiery with the three-carrier system would be held as infringing. These are some of the comments heard in connection with the progress of the Textile Patents Corporation and allied "ringless" interests in planning for wide distribution and protection of consumers as well as for licensed manufacturers.

Full-Fashioned at Low Prices Giving Seamless a Run . .

Obviously, there is considerable speculation as to the future for women's silk full-fashioned hosiery in the moderately high priced brackets, in the event that true "ringless" come on the market for fall, as they probably will, at $1 a pair for a reasonably fine gauge stocking. It is common comment among those who undertake to account for only moderate selling of the better classes of goods, that what the public wants, primarily, is price. This doubtless is in error, as it is an element among the retailers that is clamoring for price in utter disregard for quality. In any event, price promises to be an important factor in the demand for moderate priced hosiery that cannot be classed as true "ringless".

Aside from speculation as to the effect of $1 "ringless" on sales of 69-cent stockings of average good construction, it has already been definitely shown that offerings of sensationally low priced full-fashioned are telling on the sales of good types of silk seamless. Probably the lowest price at which reputed first quality full-fashioned silk stockings have been offered recently was 39 cents, the stockings being described as "dull luster brand in sheer chiffon, with French heels, slipper feet and block toes." The offering was in sixteen shades and it was no exaggeration to refer to it as a "record breaker".

Hosiery of 45- and 48-gauge, with lace tops, and a variety of shades, were offered at 55 cents a pair, while 57 cents was the price in another store for silk to top chiffons, picoted, French heels, and practically all the talking points. In a women's ready-to-wear shop, they featured at a promotion sale what were described as "three-thread silk" for 77 cents a pair. Three-thread silk 48-gauge was offered by one manufacturer for $6 a dozen. All of these offerings, from the 77-cent lot down to the 39-cent group, impressed manufacturers and distributors as well with the importance of action for such a renovation of the full-fashioned hosiery industry as might be calculated to dispose of this kind of competition.

Figures on Hosiery Stocks, Production and Orders .

During the hearing in Washington on the recommendation of the Code Authority for reducing machine hours by five hours per month an official statement was submitted that from November 1933 to May 1934 inclusive, shipments of full-fashioned hosiery exceeded production by 136,159 dozens, and that during that period stocks in mills were reduced by approximately the same figures. It will be recalled, however, that during December there was inaugurated curtailment to 24 hours a week for five weeks.

It would appear that if evidence were needed, in addition to ridiculously low prices at which hosiery has been and still is obtainable, that hosiery is in excess supply, it is presented in the compilation of manufacturers' reports for May by the Department of Commerce. The reports considered by the Department were from 328 identical mills.

Probably the more alarming showing is that relating to orders booked, amounting in May this year to more than 2,500,000 dozens less than the orders taken in the corresponding month of 1933. Equally informative, but probably less startling, are the figures showing that identical mills were carrying at the end of May this year over 1,250,000 dozens more in stock than at the end of May last year. The falling off in shipments was negligible.

It seems noteworthy that in women's full-fashioned hosiery, production, all kinds, was less in May, 1934, than in May, 1933, by approximately 250,000 dozens, these figures representing approximately the decline in net shipments as compared with May last year. The changes registered for women's seamless hosiery are insignificant.

In men's seamless hosiery, unfilled orders in May this year fell off slightly more than 200,000 dozens, while unfilled orders for hosiery of all classes increased 600,000 dozens. Production, all classes, reported by the 328 identical mills was about 100,000 dozens less than May last year.

Referring to common reports of over-production of men's half-hose, it is noted in the statistics for May that orders booked with identical mills this year were more than 1,250,000 dozen pairs less than last year. A similar decline in orders booked is shown in relation to the classification "Boys', Misses', and Children's" in which the falling off was 400,000 dozens, a decline of approximately 30 per cent. This decline in orders booked is partly compensated for by an increase in unfilled orders at the end of the month. Production of rayon hosiery, all classes, was increased slightly in May this year over the like month of 1933, while output of infants' declined by 55,000 dozen pairs, or over 50 per cent, comparing with an increase of 130,000 dozen in men's seamless rayon. Production of women's rayon hosiery, both full-fashioned and seamless, declined, while seamless silk increased by more than 100 per cent.

Notwithstanding almost any analysis of the statistics for May this year and last indicates a seriously unbalanced condition, there seems to have been an effort at balancing certain items. For example, in men's half-hose of silk and cotton mixture, there was a decline in production to 58,836 dozens from 160,971, and a drop of almost 20 per cent in

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Concerning Our July Report on Heavyweight Ribbed Underwear

With reference to the comments in this department in the July issue with reference to heavy-weight ribbed underwear, we are pleased to publish the following letter, dated July 19, from Mr. Benj. C. Russell, Chairman, southern ribbed underwear group, who is vice-president of the Russell Mfg. Co., Alexander City, Ala.:

"Editor COTTON: In reading the July issue of COTTON, we note two comments on heavy-weight ribbed underwear, one on page 93 and one on page 115. These would seem to give the impression that the ribbed underwear market is over-produced and disorganized.

"The writer, as Chairman of the Southern Ribbed Underwear Group, who produce most of the underwear in the country, wishes to correct this impression. From a recent very careful survey of all mills making fall-weight underwear, the general condition is that the average mill is sold up well into September while some are sold as far in advance as November. Out of the entire Group, only two or three mills are actually needing orders.

"You bring out the decrease in orders placed in May and June, which is explained by the fact that practically every fall-weight mill in the country withdrew their prices in March and only reopened the 9th of July. The reason for the lines being withdrawn in March was that they had all sold ahead as far as they cared to at the prevailing prices at that time.

"Should we experience an average early fall business, it will insure all mills running full time well up into the winter months and any extra buying would find a shortage."

---

rayon and cotton mixtures.

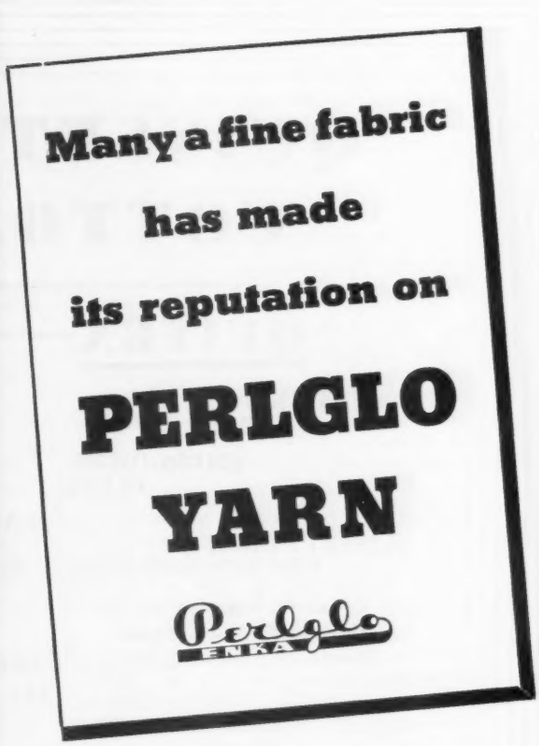
It seems noteworthy that the production of cotton hosiery, all classes, in May increased, the gain being mainly in women's seamless and the classification "Boys', Misses' and Children's". Some distributors profess to see an improved outlook for mercerized hosiery. In fact, a concern selling for mills to retailers, large and small, is in the market for a line of women's mercerized. It is pointed out that since some of the department stores have been exploiting full-fashioned stockings described as perfect, of silk construction, for 39 cents a pair, the spread between low priced full-fashioned and seamless of good construction has become so narrow that there is a possibility of full-fashioned being given further preference to the extent that the seamless industry will experience a decline in demand for women's silk. This is the explanation for a contemplated attempt at putting mercerized into competition with seamless silk, and the concern in question aims at finding a mill line to retail at about 27 cents a pair for 240- or 260-needle construction. "We want both a good mercerized as a competitor of average types of seamless silk and also a low end mercerized to retail for about 19c", says the concern. Few mills in the North, comparatively, are making this type of stocking.

Cotton Underwear Prices Advanced .

Advances of five to seven per cent in prices for men's heavy weight cotton ribbed underwear are noted in a southern mill's quite recent announcement to the jobbing trade that its line is again on sale, being theoretically off the market for some time, after booking a good volume of initial orders. The new prices represent increases over the opening in January last, by approximately 25 cents a dozen for union suits and 12½ cents for shirts and drawers.

Sellers have not been pushing for business, but it is indicated there is to be some action henceforth as to heavies. This will be necessary, say buyers, if mills aim to get the usual per cent of duplicate business by September. For the present, in the belief of some leading distributors, there will be a disposition among merchandise heads to curb buyers while there are indications of uncertainty over the question of a further processing tax on cotton and possible continuance of the July labor unrest as at the time indicated in then existing and threatened strikes of a major character. Besides, it is maintained by buyers for wholesale distributors, mills appear to have fairly heavy stocks.

It is not denied by manufacturers that there are considerable holdings of men's heavy weights, so far as relates to quite a number of mills. But, it is stated, most of the stocks were made up against orders, and some say there are orders in mill files yet to be completed, so that current



. . . with the soft iridescent glow of a pearl

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The soft iridescent glow of a pearl describes the lustre of Perlglo. In a finished fabric it becomes a bloom. The dyeing qualities are excellent. In dark colors for fall Perlglo loses none of its natural qualities and the colors are clear, true and deep—never grayish.

Perlglo yarn, according to our customers who have woven millions of pounds, is the perfect yarn for piece dyes or yarn dyes, for cross-dyes or pure whites. Now also available in our new Enka throwing cones.

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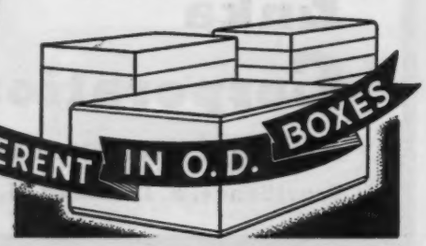

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holdings in original hands, instead of being a menace to timid jobbers, may prove advantageous to some of them putting off their fall delivery orders. It was expected by numbers of traders in July, that with cotton having moved to higher ground and the estimated acreage for 1934 a bullish factor, there is afforded protection for existing underwear contracts and values of stocks in the hands of jobbers and retailers.

Underwear manufacturers as a body have been proceeding with utmost caution for some weeks, curtailing when necessary for holding production down to approximate distribution and taking in yarns on an ultra-conservative basis, this latter proposal having confirmation in official reports of the movement of carded and combed yarns in June and July.

Men's medium and light weight union suits and athletic shirts have been moving in right good volume for manufacturers selling their branded lines direct to the retail trade. These represent the better situated as to orders and shipments, besides having a day-to-day fill-in trade with dealers who under-estimated their early summer needs and are buying as they sell, fearing to maintain stocks at the usual stage while regarding the market for textiles somewhat precarious.

Increase in Silk-Rayon Underwear Sales

With raw silk available at about the lowest prices in many years and rayon yarns to be had at severely competitive ratings, women's silk and rayon underwear sales have had an increase that a few months ago hardly was looked for. Yet manufacturers of cottons report satisfactory shipments of vests and panties, cotton snuggies losing none of their popularity. Some of the retail stores in the more fashionable shopping centers make the boast that they do not offer women's cotton underwear, although having restricted stocks that are not displayed. "We show it only when women ask for it," said the underwear manager of a women's ready-to-wear specialty shop.

While several of the leading producers of children's cotton underwear appear fairly well supplied with orders, it is stated in the retail trade that the trend to as near nothing as possible for children's play wear has had the effect of diminishing demand for virtually all types of summer underwear for the youngsters.

There is seen a prospect of reducing the friction in the cotton underwear trade due to some manufacturers who spin the yarn they consume chafing under restrictions imposed by the cotton-textile code on the operation of spindles. Also some of the manufacturers not operating spindles had dissension in their group, and there has been a difference of opinion between the two groups, mainly on the question growing of summer curtailment. It is understood that under the harmonizing influence of the Cotton-Textile Institute and the NRA Administration, differences are being ironed out and tranquility is in sight, if not already attained.

Outerwear Market Somewhat Confused

The primary markets for most lines of knitted outerwear became much disturbed in the latter part of July over the threatened strike of operatives in the mills in New York City and Brooklyn. While it was felt that if the strike really were called it would be of short duration, buyers for jobbing houses retired from the market, on the very eve of the expected start of activity in sweaters for early fall distribution.

The strike of two months ago in Philadelphia was inaugurated at a time when manufacturers were on the home-stretch of a busy production season in bathing suits. While most of the Philadelphia mills lost a large part of their season's business by reason of the shutdown of plants, the extent to which production was being curtailed seemed to have been over-estimated by manufacturers elsewhere, with the result there was an unnecessary speeding pp, and early in July some few mills were sacrificing bathing suits. There had been excess production, and consumer buying did not come up to expectations, due to continued unemployment. This echo of the strike in Philadelphia causes manufacturers at the commencement of the fall sweater business to still withhold orders that ought to have been in process early in July.

Distribution of spring sweaters was disappointingly light, but the situation was bridged, in some extent, by demand for knitted cotton sports suits, embracing sweaters.

Knitting Mill Notes

Retailers in some of the larger cities were reported in July "reducing stocks"—in other words, refraining from placing orders, stating they believed offerings from manufacturers would be in increasing quantity and that they were waiting for first hand information concerning "ringless" types for fall. The allegation was made in some instances, according to a statement by a distributor to large retailers, that "regulars" had in some instances been offered at the prices for irregulars, but not stamped accordingly.

The executive of a nationally known Philadelphia mill selling to the jobbing trade states a buyer recently offered an order for 10,000 dozens of women's 42-gauge silk at a very low price which he, the buyer stated, had been quoted elsewhere. "Strange that you fellows telling us of low prices never hear of higher prices," said the executive, who made it plain to the buyer he was in the wrong mill if he were looking for underpriced stockings. "As we make up nothing for stock, we do not have distress goods," he explained.

A southern manufacturer, sold up of 42-gauge hosiery but having idle 45-gauge machines, is reported by a buyer visiting mills to have offered to supply a reasonable quantity of 45-gauge at the same price he was quoting for 42-. The buyer thought the $5.25 price of 42- too high for even 45-gauge.

A New York hosiery selling agent who has been advocating the stamping of women's full-fashioned to indicate the number of needles, instead of describing the stockings by gauge, and also indicating in indelible ink the fiber content, is reported in the trade making no headway, manufacturers representing they already have all the trouble the traffic will bear. The selling agent would have three grades —A, B and C—and an enforceable merchandise mark a law.

Failing to agree with the William Brown Co., Philadelphia, on terms for renewal of the lease of the plant, the Interstate Hosiery Mills, Inc., Lansdale, Pa., vacated June 30 and the 190 machines were left idle, with no prospect, said the owners, of soon going into production. The William Brown Co. is owner of the trademark "Granite", and its plant comprises 39-, 42- and 45-gauge machines.

There continues lively demand for used full-fashioned hosiery machines in the coarser gauges, a number of 39- and 42- changing owners somewhat recently. Six machines were installed by the Fashionmaid Hosiery Co., Philadelphia, and four 39-gauge in a mill in Minnesota, all sold through a former manufacturer recently active in helping manufacturers to sell machinery for accommodating installation of modern new equipment.

A few capitalists in Pottstown, Pa., midway between Philadelphia and Reading, are about getting into full operation with a small new plant for the manufacture of underwear, the line consisting of men's athletic shirts, women's vests and misses' bloomers and vests. The new concern, chartered for $25,000 capital, is the Erntex Knitting Mills, Inc., of which John W. Leveille is president and treasurer.

Burd Knitting Mills, Philadelphia, announces the firm has contracted with the Berkshire Knitting Mills for distribution of all of the company's hosiery seconds.

Referring to reports of the Department of Commerce, the National Association of Hosiery Manufacturers finds that imports of hosiery from Japan in the first five months of 1934 were 17 per cent greater than for the corresponding period of last year, the arrivals at American ports amounting to 92,887 dozens, valued at $32,748, which averages around 36 cents a dozen.

An Indiana manufacturer of full-fashioned hosiery is featuring the 3's-a-pair plan, a revival of an idea of some years ago which eventually faded away on the ground the three stockings would have to be worn and laundered alternately for like periods, as otherwise the spare stocking shade would not tally with that of the pair.

REVIEW OF THE YARN MARKET

Philadelphia, Pa., July 17, 1934.

THE market for cotton yarns has been showing considerable strength since the commencement of the rise in prices following issuance of the Department of Agriculture report on acreage planted for 1934. The Philadelphia trade, while not being carried off their feet with enthusiasm over the better position of yarns, regards the outlook very promising for fairly brisk fall business. Demand will be necessary, however, to maintain the prices established when cotton had scored 13.25 cents on the New York exchange.

The rise in cotton served as a ram with which to batter down the walls existing between spinners and a profitable market for their product, this applying more especially and with considerable force to carded yarns for the knitting trade, in which for the time the losing game has been halted. Billings improved in July, but were not at a level indicating that yarn consuming mills were receiving any very great flood of orders, for shipping instructions against old contracts, at lower than mid-July prices, were not received in the volume that might in the circumstances have been expected.

Having started on a losing market, prices for carded yarns moved further than the advances in raw cotton. This week brought more inquiry, but no great amount of new business, although some yarn was sold at the advances and contracts entered, in instances, for August to December deliveries. It developed however, that comparatively few spinners were eager for orders for distant delivery.

Buyers for underwear mills were interested in single carded 26s to 30s, with 26s quoted 34 cents for extra and 36 cents being asked for 30s. Prices had moved up to a basis of 27½ to 28 cents for 10s. Advances by some southern spinners amounted to 2½ cents a pound in around two weeks. In one instance a price of 33 cents for a given count of carded on cones was advanced this week to 34, although an option to buy at 33 had been extended, necessarily being withdrawn with notice of the increase. The prices referred to were for good to extra yarns, super carded being quoted 1½ to two cents more. Some Philadelphia houses reported their billings for June and July only a trifle below seasonal normal, considering general trade conditions.

During the rise, accompanied by no excitement, differentials as to cone and warp yarns were for a time disregarded, depending on stocks and orders in given mills. Single 20s warps were commanding 31½ to 32 cents with cones 30 to 30½ for the same count. Two weeks before, there existed a spread of more than two cents.

Combed single yarns, while necessarily quoted higher, have not registered the advances scored by carded. A quotation of 40½ cents for 30s was given this week, corresponding with 43½ to 44 for 36s and 44½ to 45 for 38s. One house was quoting 35 to 35½ for 18s single carded and 36½ to 37 for 22s. Single combed came into better inquiry during the week, and it was believed some business was developing in the underwear field.

Mercerized yarns, which had eased off in demand when there were indications of a radical curtailment in production of hosiery, showed more activity when there no longer existed doubt that current schedules would be retained by manufacturers of both seamless and full-fashioned. Prices have advanced to a basis of 70 to 72 for 60s mercerized ply yarns. One leading mercerizer quotes 100s $1.32 to $1.35 and 120s at $1.82 to $1.84.

Worsted Yarns

Comparatively, worsted spinners are in a worse plight than are those producing cotton yarns. Wool had a dip in prices in London, and, although domestic wool costs manufacturers less than imported stock of like grade and characteristic out of bond at American ports, it is psychology of the decline abroad that buyers for consumption are less certain that prices for domestic lines can be maintained. Worsted yarns therefore have weakened, but to precisely what extent is not easy to state with any degree of accuracy. There is a disparity of 10 cents and more in the quotations of varying spinners, whose prices seem adjusted to their individual viewpoint as converters of wool. Where heretofore there usually was differential of five cents as between quotations on Bradford system and French system yarns, in some recent trades it amounted to as much as 20 to 30 cents.

Price is a matter of depending on a seller's judgment. Some have cumbersome stocks, while some have made much progress toward a clearance of stock yarns out of higher price wool. Spinners were so eager to sell on the 1933 rise and manufacturers so ready to contract that the result was overproduction beyond limitations ever before experienced, say old-time factors. Much of the contract yarn never was delivered, buyers exercising the assumed right to cancel orders and no questions asked. Under the existing code, cancellations are a violation that may be penalized by some NRA deputy administrator which accounts for the fact so little new business in worsted yarns has been developing.

Berkshire Knitting Mills declined to deny or confirm a report from Chicago that it had reduced the price of its 4-thread silk 42-gauge to $5.25 a dozen in bundles, or $5.35 for half dozen packing in cartons.

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In the condition of the cotton yarn and raw silk markets in July it was regarded impracticable to undertake to name prices for the opening of infants' socks for spring 1935, and it seemed apparent leading manufacturers were in no haste to show their lines. In any event, it was suggested by some, no one will be hurt by a late opening and much dislocation of the business in socks might result from a showing before September, especially in view of the fact a considerable number of novelties in the way of new creations are coming out.

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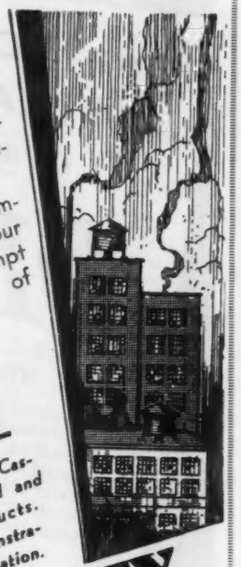

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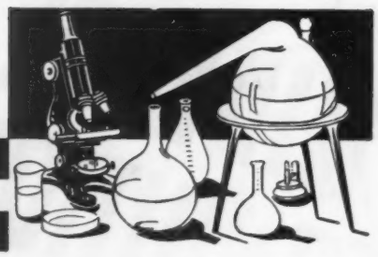

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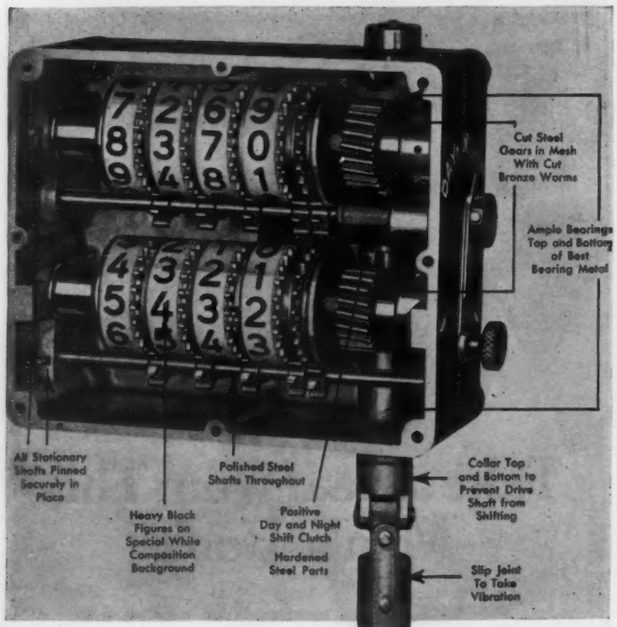
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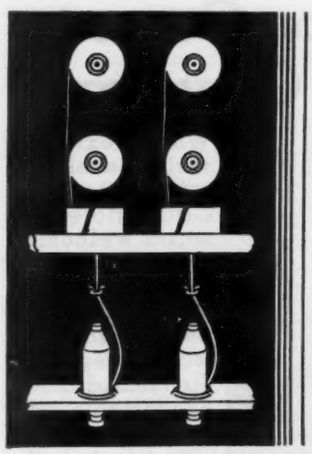


DON'T LOSE *money* Twisting *from* Spools
Use the
ABBOTT SYSTEM
write and see why
to ABBOTT MACHINE CO.
WILTON, N.H.

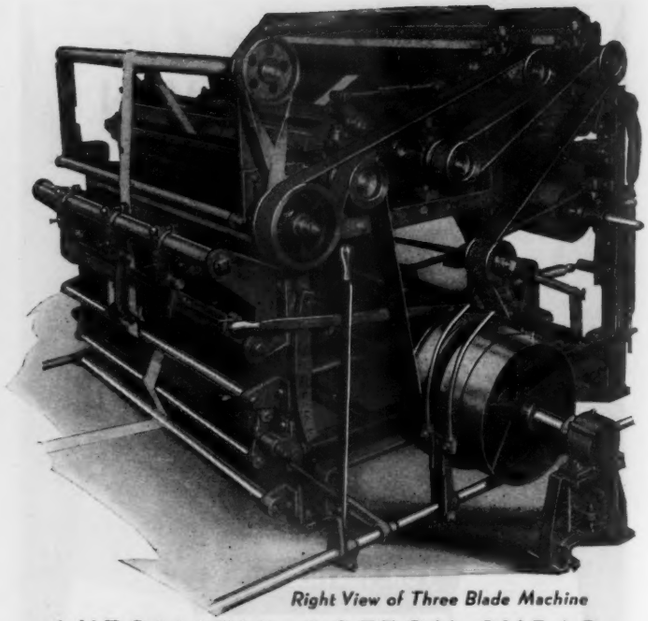
Unless-- your plant, like so many other modern industrial buildings, is surrounded by a sturdy Stewart Non-climbable Chain Link Wire Fence. Industrial leaders everywhere are realizing the protection Stewart Fence affords against trespassers, labor trouble makers and thieves. Stewart construction features have won the immediate favor of the executives of many of our nation's greatest industrial institutions. Write for the address of your local Stewart sales and erection office—their trained experts will gladly advise you and give you quotations without obligations.

The STEWART IRON WORKS CO., Inc.

210 Stewart Block

Cincinnati, O.

Stewart IRON AND WIRE FENCES



Right View of Three Blade Machine

AUTOMATIC COTTON SHEAR
RUNS ITSELF

SAVES SO MANY GIRL TRIMMERS
PAYS ENTIRE COST IN A FEW MONTHS
CHEAPEST WAY TO CLEAN YOUR CLOTH
WE PROVE BY FREE TRIAL

P. B. RAIFORD, Jr.
SOUTHERN REPRESENTATIVE
CONCORD
NO. CAROLINA

PARKS & WOOLSON MACHINE CO.
SPRINGFIELD, VERMONT

AN UP-TO-DATE PRINTING PLANT

equipped with modern machinery and a staff of competent workmen, solicits, thru this publication, a trial order on your printing needs.

We have built a reputation that is known over the entire South by our special attention to the minutest detail.

We are more than ready to answer any question that relates to your printing problems.

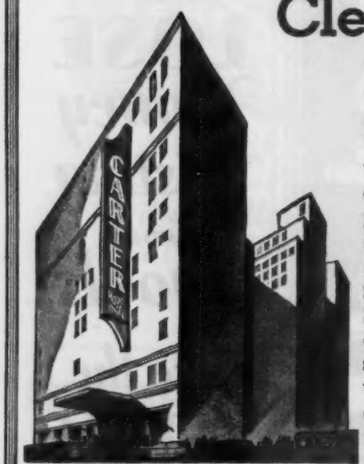
Write us and let us quote you on anything from a postal card to a full bound book.

The A. J. Showalter Co.

PRINTERS AND PUBLISHERS

DALTON GEORGIA

When You Come to Cleveland



The Carter Hotel, in the heart of Cleveland is conveniently located close to leading department stores, theatres, banks and transportation terminals.

Room Rates Begin at $2.50

When next you visit Cleveland come to the New Carter Hotel. A warm welcome awaits you—prompt, courteous service and delicious food at reasonable prices. Six hundred large, comfortable outside rooms each with private bath and circulating ice water. Exceptional facilities for conventions and sales meetings. Personalized management.

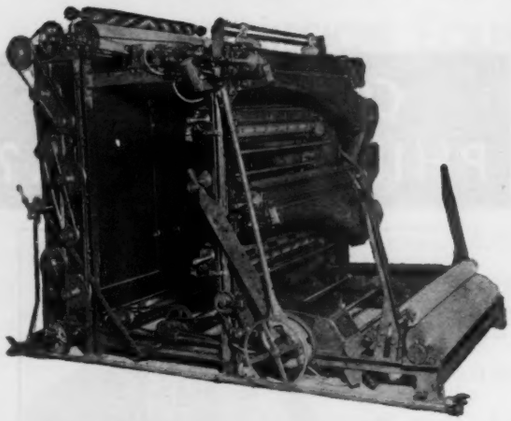
The CARTER HOTEL

PROSPECT NEAR EAST NINTH

CLEVELAND, OHIO

WILLIAM T. CRUSE, Manager

An ADDING MACHINE, for ACCURATE, FAST figuring



--a HERMAS BRUSH AND SHEAR for ACCURATE, FAST trimming

You don't figure your accounts on your fingers—why pick your goods by hand?

Hand work isn't only slow—it's inaccurate, whether the work be taking a trial balance, or cleaning goods in the cloth-room.

That's why you use adding machines—and that's why leading mills use the Hermas Brush & Shear for removing leaf, motes, trash, strings, and nibs.

These machines not only do the work faster but they clean better than by hand and with absolute uniformity.

Every day's production will be trimmed identically the same. This eliminates many sources of rejects, and trouble in printing, dyeing and embossing.

NO OPERATOR REQUIRED

The Hermas Brush & Shear is fully automatic.

Hermas Brushes & Shears pay for themselves in a few months in most plants. They will in yours too. Let us make a report, at our erpense, of savings you can effect in your mill. One of our representatives will be glad to call and make a survey of your clothroom to show you exactly what the Hermas Brush & Shear will save in your plant. No obligation.

In coming to Hermas you are coming to headquarters. Three times as many Hermas Shears are in use to-day as all others combined

HERMAS MACHINE CO.

HERMAS

Warburton Ave., Susquehanna R. R., Hawthorne, N. J.

Southern Representatives:
Carolina Specialty Co., Charlotte, N. C.

"I TOOK OUT 3 TEETH OF TWIST AND SPEEDED UP THE FRONT ROLL 12%."

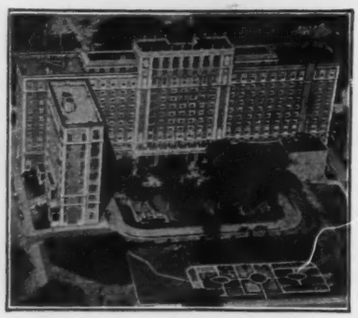
After installing new DIAMOND FINISH rings, the overseer of a Southern mill made a twist gear change that enabled him to get 12% more delivery from the front roll. This was on filling yarns and was accomplished without any increase whatever in the end breakage, which had been satisfactory before the change.

Production increases quickly pay for new DIAMOND FINISH Rings!

WHITINSVILLE (MASS.) SPINNING RING CO.

Makers of Spinning and Twister Rings since 1873

A HOTEL ROOM SHOULD HAVE MORE THAN JUST FOUR SIDES



A ROOM is a room when it has four sides but at the Atlanta Biltmore the rooms have much *more* than four conventional walls.

That is why so many Biltmore guests always come back—because the rooms are so airy, so comfortable, even in midsummer (there are no court rooms); because the appointments are so complete, so luxurious; the beds so restful; and the service so prompt and unobtrusive.

Yes, and there's privacy at the Biltmore; even the lobby and mezzanine are so arranged that "timid souls" can be apart from the crowd if they so desire.

And you'll like the informal atmosphere that ever prevails—just be yourself and get comfortable (textile men can appreciate this).

Speaking of comfort, just dine on the garden terrace one of these warm nights and see for yourself how cool and pleasant it is to dine out under the stars.

Reasonable Rates:
(No Court Rooms)
Single, $3, $4, $5
Double Beds, $4.50, $5.50, $6.50
Twin Beds, $5, $6, $7

DINING ROOM:
Breakfast, 35c, 50c, 60c, 70c.
Luncheon, 75c, $1.00.
Dinner, $1.00, $1.50.

ATLANTA BILTMORE

"The South's Supreme Hotel"

COMING TO PHILADELPHIA?

A SYMBOL

OF HOSPITALITY

When you visit Philadelphia make **HOTEL PENNSYLVANIA** your home . . . You will find its location convenient—ten minutes to the business section . . . away from congestion and noise. . . . Known the world over for its hospitality . . . food that satisfies.

600 ROOMS, Each With Bath
From $2.50 Single, $4.00 Double

HOTEL PENNSYLVANIA

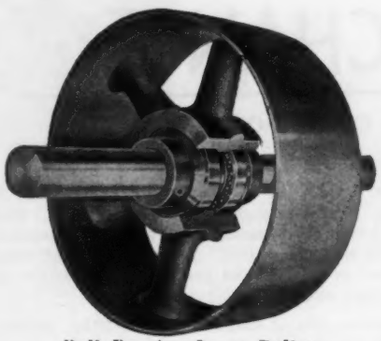
39th and CHESTNUT STREETS
PHILADELPHIA

BALL BEARING
TRANSMISSION EQUIPMENT
using
Fafnir Ball Bearings

Drop Hangers
Post Hangers
Pillow Blocks
Loose Pulleys
Blower and Fan Boxes
Flange and Cartridge Units
Spinning and Twister Frame Boxes
and
Special Applications

Blower and Fan Bearings

(Write for our Catalogue No. 11)



Ball Bearing Loose Pulley

GOLDENS' FOUNDRY & MACHINE CO.
Columbus Georgia

Also Manufacturers of

Pulleys
Rope Sheaves
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Continuous Dyeing Machines
Raw Stock Dyeing Machines
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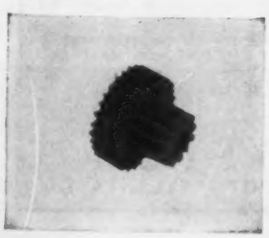
Cotton Mill Castings

SERVICE *With* QUALITY TEXTILE REPAIR PARTS

The long, trouble-free service that Henderson Textile Repair Parts are giving every user is stronger evidence than anything we could say regarding their superiority. The reasons for their superiority are higher quality materials, skilled workmanship and precision patterns that make Henderson parts fit perfectly.

There are precision patterns or parts for practically all looms, pickers and other textile machinery ready for quick shipment to you, and our low overhead and close location enable us to make worthwhile savings and render quicker service. Quotations gladly sent on any textile part required.

HENDERSON FOUNDRY & MACHINE WORKS
HAMPTON, GEORGIA



Clipper Hooks are 15% lower in price than any other hook made in America, yet are unsurpassed in quality & durability

PROTECTION against operating delays is becoming increasingly important. In this new era of regulated labor and raw materials every plant executive should look to the efficiency of his lacing equipment.

CLIPPER BELT LACER COMPANY, GRAND RAPIDS, MICHIGAN

Clipper
Lacing Equipment

U. S. Pat. 1904316

50 TYPE PICKERS
Last Longer

Graton & Knight longer wearing, more easily installed. 50 Type Pickers are made from tough, rugged, research leather. They are made in three thicknesses, all accurately maintained.

G & K 50—7/32" thick loop
G & K 55—3/16" thick loop
G & K 60—5/32" thick loop

Graton & Knight distributors located in every principal textile center carry complete stocks.

GRATON AND KNIGHT

GRATON & KNIGHT COMPANY
WORCESTER, MASS.

Fully 25% of All Cotton Textile Spindles in the United States are Operated on the Loper System.

Ralph E. Loper Co.

INDUSTRIAL ENGINEERS

Specialists in Textile Costs Over 21 Years

FALL RIVER, MASS. GREENVILLE, S. C.

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BUSINESS—EMPLOYMENT—EQUIPMENT—PROFESSIONAL CARDS—OPPORTUNITIES

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Rates are net, payable in advance each month. No commissions or discounts. Page is 3 columns, 10 inches deep—30 inches to page. Space measured by even inch vertically by 1, 2 or 3 columns in width. Column width 2¼ inches. Rates based on the total space used in one year.

	Per Inch		Per Inch
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3 inches	4.80	20 inches	4.00
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UNDISPLAYED

Advertisements set "Want ad" style. Positions wanted .05 word per insertion. Minimum charge $1.00 per insertion. Cash with order. All other classifications .10 word per insertion. Minimum charge $2.00 per insertion. Advertisements of equipment, for sale, rent or wanted and professional cards are accepted at display rate only.

Box number addresses care of COTTON, Grant Bldg., Atlanta, Ga., count as eight words.

Products Wanted

One of our clients, a New England manufacturer with sales organization contacting textile mills throughout the world, desires to manufacture and sell accessory of merit, preferably covered by strong patents, and applicable to existing looms or other textile machinery. Strictest confidence observed.

William L. Fletcher
8 Newbury Street,
Boston

POSITION OPEN

The Brooks Oil Company desire experienced boiler room specialty salesmen to cover two established territories selling Brooks Improved Boiler Metal Treatment and other products. Only well qualified and recommended need apply. Must have automobile. Drawing account and high commission. Excellent opportunity for the right men. State full experience and references. Address Brooks Oil Company, Cleveland, Ohio

BETTER TEXTILE MACHINERY

With 25 years experience with largest textile machinery builders, designing, engineering and selling—with knowledge of how to secure machinery at the greatest savings and how to save time and expense in shipping—We are able to render our clients a service they cannot secure elsewhere. Tell us what you want.

AT A GREATER SAVING

GEORGE F. LANGEVIN, 20-22 Howe Bldg., LOWELL, MASS
Specializing in Textile Machinery for Relocation.

WANTED

Ideas—patents, or new devices to make and sell on royalty basis, or will buy outright. Address Box 122, care COTTON, Grant Bldg., Atlanta, Ga.

WANTED

Salesman, preferably man with mill experience, to sell textile machinery in Southern territory. Must be familiar with trade. Give age, full experience, sales record, salary desired. Address Box 123, care COTTON, Grant Bldg., Atlanta, Ga.

J. PRESTON SWECKER
PATENT LAWYER

1101 Earle Bldg., Washington, D. C.

Paul B. Eaton

PATENT LAWYER

1408 Johnston Bldg., Charlotte, N. C.
514 Munsey Bldg., Washington, D. C.
Former Member Examining Corps
U. S. Patent Office

Your Advertisement In This Section—

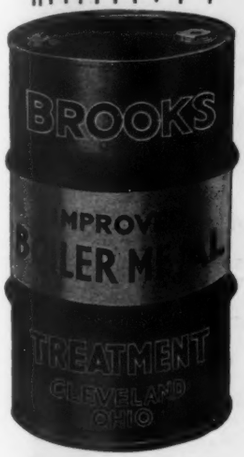
HAVE you some equipment, new or second-hand, which you wish to dispose of; or do you desire a good man to fill a vacancy in your mill; do you desire a position; do you desire your business or professional card placed before the textile industry?—

Then why not try an advertisement in this section of COTTON with its 10,000 copies per month?

Advertising in this section produces results at small cost. Note the rates above and tell us what you wish to advertise.

COTTON
GRANT BLDG. ATLANTA, GA.

MILLIONS LOST



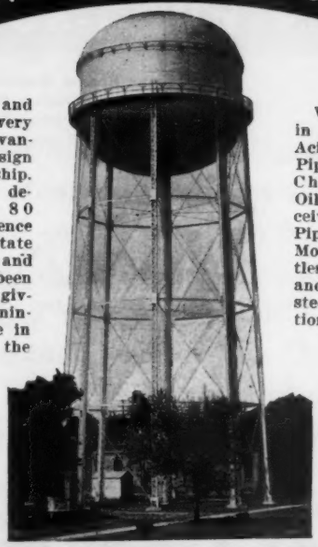
BOILER SCALE, corrosion and pitting have taken a toll of millions of dollars worth of equipment—and like amounts in fuel losses and boiler repairs. Such losses in boiler rooms are due to neglect, as they can easily be prevented. Forget about water analysis and treatment — the certain economical, easy way to eliminate scale, pitting and corrosion is with

BROOKS IMPROVED BOILER METAL TREATMENT

which does a thorough job regardless of the condition and the constant chemical change in feedwater. If you are a user of BROOKS, you *know* this. If you are not a user, we will gladly *prove* it to you with a special 60 day trial offer. A postcard will bring full details.

BROOKS OIL CO.
CLEVELAND, OHIO

COLE
TANKS TOWERS



Cole Tanks and Towers offer very distinctive advantages in both design and workmanship. They have been developed over 80 years of experience to the highest state of efficiency and hundreds have been erected and are giving perfect, uninterrupted service in every section of the country.

We also specialize in Boilers, Kiers, Acid Tanks, Stand Pipes, Smoke Stacks, Chemical Vessels, Oil Tanks, Air Receivers, Welded Pipes and Tanks, Monel Tanks, Kettles, Storage Bins and other forms of steel plate construction.

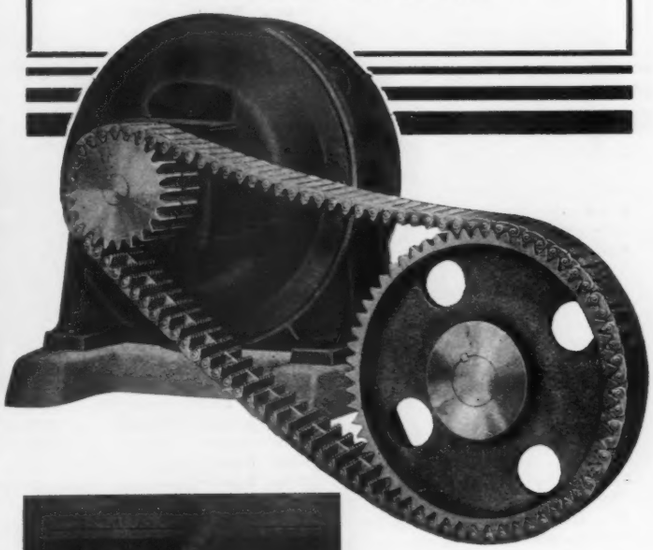
Our Engineering Department will be glad to cooperate and submit designs to meet any requirement.

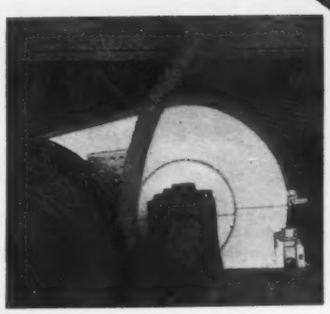
Let us quote you prices when you are in the market for tanks, towers or other steel products.

R.D.COLE MANUFACTURING CO.
NEWNAN EST. 1854 GEORGIA
FABRICATORS OF STEEL AND ALLOY STEEL PLATE

It Costs so Little to Transmit Power - Positively - with the Efficient LINK-BELT SILENT CHAIN DRIVE

Send for Data Book 125
and Stock Drive List 725





Link-Belt Silent Chain Drive operating in cool running, oil-leak-proof Link-Belt TEX-TIL Casing.

LINK-BELT COMPANY
PHILADELPHIA CHICAGO INDIANAPOLIS

Atlanta - - - 511 Haas-Howell Bldg.
Baltimore - - - 913 Lexington Bldg.
Dallas - - - - 413-15 Second Ave.
New Orleans - - - 619 S. Peters St.

Offices in Principal Cities

5073

LINK-BELT
SILENT CHAIN DRIVES

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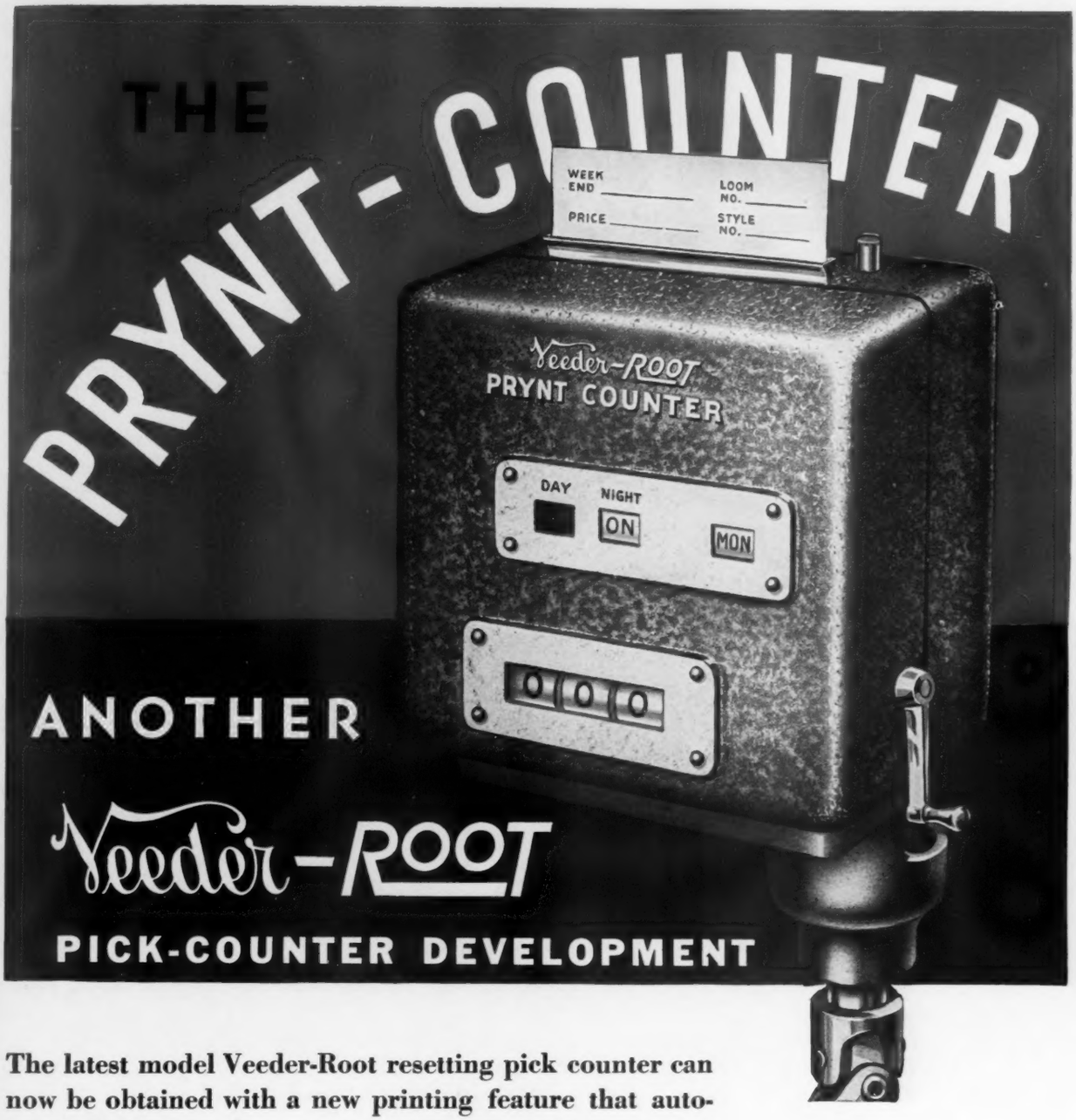

The latest model Veeder-Root resetting pick counter can now be obtained with a new printing feature that automatically prints on a card a complete and permanent record of the number of picks produced by each loom, each shift, each day . . . one card takes care of two shifts for a pay period, and provides an indisputable record of each loom's production. This pick counter incorporates all the latest improvements in pick counter design and offers mill owners the most advanced equipment it is possible to buy. Write, today, for complete information on this new development.

VEEDER-ROOT INC.

HARTFORD, CONN. GREENVILLE, S. C.

BOSTON PHILADELPHIA MONTREAL LONDON

BUILDERS OF COUNTING DEVICES SINCE 1878

AFLOAT

Along companion-ways . . .'round the ballroom . . . on the sports deck . . . appear the finer PRINTS...the whiter Whites and clearer Tints produced by

DISCOLITE

REG. U.S. PAT. OFF.

ASHORE!...reported satisfaction at the mill follows DISCOLITE treatments...the clean, sharp-cut figure work of this iron-free discharging agent. ● Scratchless printing...free and even runs...WHITEST WHITES on Weighted Silk, on Rayon or Cotton, and mixtures as they come. It's DISCOLITE for clearer, contrasty printing! ● *In Powder or Lump form.*

Silk, Courtesy C.K. Eagle & Co.

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CHEMICAL COMPANY
Chemical Manufacturers
CARLTON HILL, NEW JERSEY
NEW ENGLAND REPRESENTATIVES: RICHARD HAWORTH, INC.
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